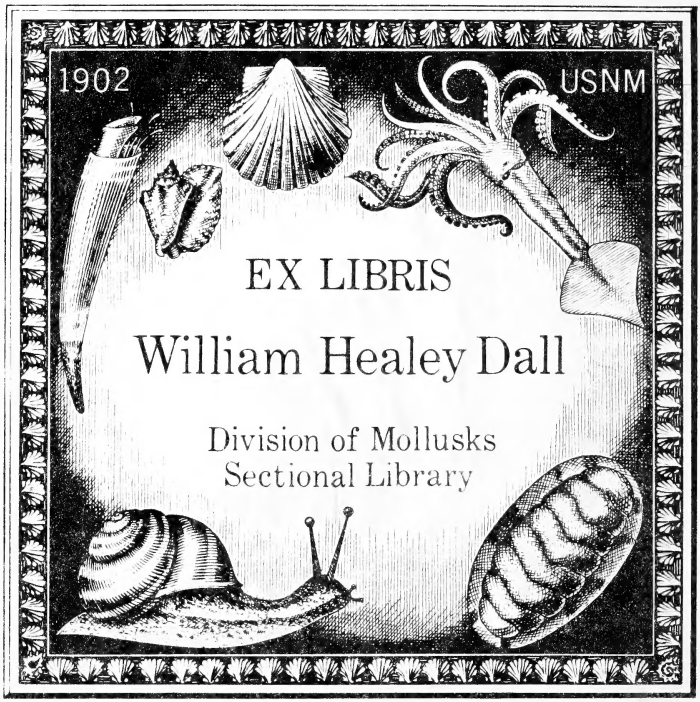
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DREDGING AND OTHER RECORDS

OF THE

UNITED STATES FISH COMMISSION STEAMER ALBATROSS,

WITH

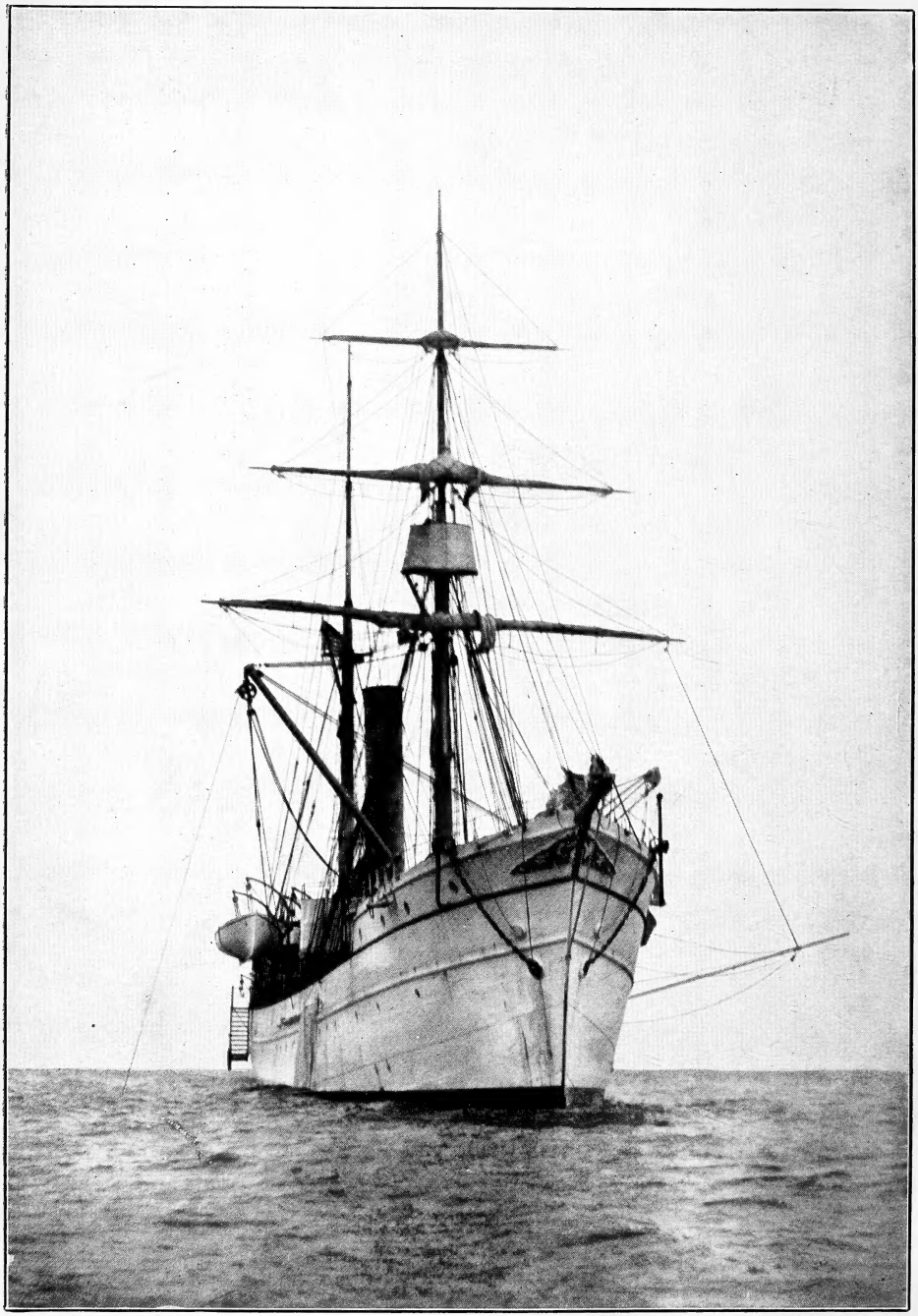
BIBLIOGRAPHY RELATIVE TO THE WORK OF THE VESSEL.

COMPILED BY

C. H. TOWNSEND,
Chief of Division of Fisheries, U. S. Fish Commission.

Extracted from U. S. Fish Commission Report for 1900. Pages 387 to 562.
Plates I to VII.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1901.



THE ALBATROSS DREDGING, SHOWING PORT BOOM RIGGED FOR SURFACE TOWING.

DREDGING AND OTHER RECORDS

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Compiled by C. H. TOWNSEND,
Chief of Division of Fisheries, U. S. Fish Commission.

PREFACE.

The records of observations connected with the dredging, sounding, and other operations conducted on board the *Albatross* since the first voyage of the vessel in 1883 have been published in full from year to year in the reports of the United States Fish Commission; but being scattered through a series of bulky volumes, many of which can no longer be supplied, it has become desirable to bring them together in order to secure complete data respecting these operations. The writer, on account of his familiarity with the work of the ship, having served as naturalist during most of the cruises from 1886 to 1900, has been requested to compile the records and bibliography.

There has been a demand for the station records of the *Albatross*, not only as an aid in identifying the large collections of the vessel placed in the hands of specialists for study or deposited in museums, but as a reference book for use in connection with the numerous reports which have already appeared relating to them. In certain papers based on *Albatross* material localities are referred to by station numbers only, which the complete dredging records presented herewith will render intelligible.

The dredging records include data connected with 1,786 hauls of the dredge, beam trawl, etc., at all depths from the shore down to 4,173 fathoms (the deepest), and cover areas extending from the Banks of Newfoundland along both coasts of North and South America to Bering Sea, with limited areas in the tropical Pacific and the region from Japan to Kamchatka. The data accompanying the serial numbers of the stations show the date, position, depth, temperature of surface and bottom, the character of bottom, and the instrument used.

The hydrographic records are included here as an aid in the identification of specimens of bottom deposits. As the 4,000 or more soundings made by the vessel have already found their way upon the various charts of the Atlantic and Pacific oceans, their positions have not been platted on the accompanying maps in connection with those of the dredging stations.

The serial numbers of *Albatross* dredging and hydrographic stations, the former beginning at 2001 and the latter at 1, were carried without change or duplication from 1883 until 1899, when the series "A. A." (A. Agassiz) was added temporarily. During the cruise through the tropical Pacific all of the specimens received "A. A." numbers; these are shown, both in the dredging and hydrographic series, in columns parallel with the regular serial numbers, which are still continued.

The records of tow-net stations—not kept systematically during the earlier work of the *Albatross*—are presented for the period from 1887 to 1900 only. The numbers identifying them are not, unfortunately, continuous from year to year. They are frequently identical with the nearest dredging or hydrographic stations.

The oceanic areas explored by the *Albatross* have been platted upon the accompanying series of charts. As the vessel returned to certain regions year after year, it will be noticed that the serial numbers of the dredging stations are much scattered. Two of the maps show the positions of dredging stations in depths greater than 100 fathoms, the dredgings of less than 100 fathoms being shown on a separate map.

A list of dredging stations, by Sanderson Smith, published in 1888, contains, with earlier dredging records, several maps which show the positions of dredging stations. It is numbered 58 in the accompanying catalog of publications. Other maps showing the positions of *Albatross* dredging and hydrographic stations will be found in the papers numbered 52, 59, 71, 86, 87, 89, 117, 159, and 198. The most important of these, with respect to deep-sea dredging, is No. 86 (same map as in No. 198), showing the positions of stations from Panama to the Gulf of California.

The catalog of papers relating wholly or in part to the work of the *Albatross* numbers nearly 300 titles, including those in preparation. It is annotated briefly, the names of new genera and species described in each paper being given in full.

The yearly reports of the commanding officer of the *Albatross* contain accounts of the daily movements of the vessel. They present not only the dredging and hydrographic data, but the records on ocean temperatures, specific gravities, and other observations made on board, with many notes on the general character of dredge hauls. Reference should be made to these reports[1] for many details respecting the work of the *Albatross* and for numerous records not presented in this paper.

Special papers on the results of *Albatross* investigations have been published in the reports and bulletins of the U. S. Fish Commission, the proceedings, bulletins, and reports of the U. S. National Museum, the bulletins and memoirs of the Museum of Comparative Zoology, the proceedings of the Biological Society of Washington, the transactions of the Connecticut Academy of Arts and Sciences, and in the American Journal of Science. In the proceedings of the U. S. National Museum

[1] Numbers 14, 35, 45, 46, 52, 53, 70, 87, 99, 132, 159, 160, 185, 190.

will be found a series entitled "Scientific results of explorations by the U. S. Fish Commission steamer *Albatross*"; the bulletin and memoirs of the Museum of Comparative Zoology contain a series of "reports on the dredging operations off the west coast of Central America and Mexico to the Galapagos Islands and in the Gulf of California, under the direction of Alexander Agassiz."

The bibliographical matter is arranged chronologically and is composed almost entirely of American papers, although the titles of a few European publications will be found near the end of the catalog. The explorations of the vessel have been referred to from time to time in the reports of the *Challenger* and other European deep-sea exploring expeditions, and in the journals of geographical societies, but very few contain more than brief notes on the subject.

It has not been thought desirable to include the titles of certain official documents relating to the naval patrol of Bering Sea, in which the *Albatross* was much employed; and some unimportant references in periodicals have also been disregarded. A considerable amount of deep-sea exploration was accomplished by the U. S. Fish Commission steamer *Fish Hawk*, both before and after the launching of the *Albatross*, which has been the subject of numerous reports in the publications of the Fish Commission and elsewhere. In some reports the results of the work of the two vessels were combined.

The *Albatross* has been regularly in charge of naval commanders whose periods of service have been as follows: November, 1882, to May, 1894, Z. L. Tanner; May, 1894, to May, 1896, F. J. Drake; May, 1896, to the present time, J. F. Moser. Occasionally, when employed in special investigations, the work of the ship was placed under the direction of other persons.

During the work of the *Albatross*, which was primarily the investigation of the fisheries and fishing-grounds, dredging was carried on more or less regularly as opportunity afforded, but it has been by no means continuous from year to year. For several years, from about 1892 to 1898, comparatively little work of this character was accomplished, owing to the vessel having been frequently detailed for special lines of work in other departments of the public service. In 1889 the *Albatross* was assigned for a time to the service of the Senate Committee on Indian Affairs in Alaskan waters, and in 1891 was engaged for several months in the survey of the cable route between California and the Hawaiian Islands. In 1898 it was detailed to the Navy Department for service in the war with Spain. During the long period of the Bering Sea controversy the vessel was much employed in connection with the naval patrol of Bering Sea and in the service of the commissions created for the investigation of the fur-seal fisheries. The surveys of fishing-grounds, always accompanied with considerable use of the dredge, and the special voyages for deep-sea exploration were thus so frequently interrupted that dredging was practically discontinued for long periods.

The work of the *Albatross* from her first voyage to the present time may be stated briefly as follows:

1883. Fishery and deep-sea investigations off the coasts of the Middle Atlantic and New England States.
1884. Fishery, hydrographic, and deep-sea investigations along the Atlantic coast of the United States and in the Caribbean Sea.
1885. Fishery and deep-sea investigations along the Gulf and Atlantic coasts of the United States and northward to Newfoundland.
1886. Fishery, hydrographic, and deep-sea investigations among the Bahama Islands and along the Atlantic coast of the United States northward to Newfoundland.
1887. Deep-sea explorations among the Lesser Antilles and along the Atlantic coast of South America on voyage to the Pacific coast.
1888. Voyage around South America continued, with deep-sea explorations off the Pacific coasts of South America and Mexico and fishery investigations off the United States and Alaskan coasts.
1889. Fishery and deep-sea investigations off the coast of the United States and Lower California.
1890. Fishery investigations off the west coast of the United States and in Bering Sea.
1891. Deep-sea explorations, west coast of Mexico and Central America and off the Galapagos Islands (winter).
Cruise with Bering Sea Commission to the Pribilof Islands (summer).
Fishery investigations off the coast of Washington and survey of cable route between California and Hawaiian Islands (fall).
1892. Hawaiian cable survey continued. Fur-seal and fishery investigations, Alaskan coast, and voyage to Commander Islands.
1893. Fur-seal and fishery investigations in Alaskan waters and patrol of Bering Sea.
1894. Fur-seal investigations and patrol of Bering Sea.
1895. Fur-seal investigations in Alaskan waters and voyage to Commander Islands.
1896. Fur-seal investigations, Pribilof Islands, Commander Islands, Okhotsk Sea, Kuril Islands, Japan coast, and return voyage via Hawaiian Islands.
1897. Fishery investigations, west coast of the United States, and special salmon fishery investigations in Alaska.
1898. In service of Navy Department during war with Spain.
1899–1900. Voyage of exploration through the tropical Pacific to Japan. Salmon fishery investigations in Alaska.
1901. Salmon fishery investigations in southeast Alaska.

While it is scarcely expected that the present compilation will be free from errors, it is hoped that it will be of substantial service not only in connection with the study of the ever-increasing collections of the *Albatross*, but as a contribution to the general subject of oceanography.

WASHINGTON, *September 27, 1901.*

List of abbreviations used in the dredging and hydrographic records to denote the instruments employed and the characters of the bottom.

Abbreviation.	Meaning.	Abbreviation.	Meaning.	Abbreviation.	Meaning.
bk	black.	lge	large.	slat	slate color.
br	brown.	lt	light.	sml	small.
brk	broken.	m	mud.	sp	specks.
bu	blue.	mang	manganese.	st	stones.
c	clay.	min	mineral.	stf	stiff.
choc	chocolate color.	nod	nodules.	stk	sticky.
co	coral.	oz	ooze.	vol	volcanic.
crs	coarse.	p	pebbles.	wh	white.
dd	dead.	part	particles.	yl	yellow.
dk	dark.	pter	pteropods.	L. B. T	Large beam trawl.
fne	fine.	pum	pumice.	S. B. T	Small beam trawl.
for	foraminifera.	r	rock.	Bl. Dr	Blake dredge (deep-sea dredge).
frag	fragments.	rad	radiolaria.	Sh. Dr	Ship's dredge (mud bag).
g	gravel.	rd	red.	Tgls	Tangles.
glob	globigerina.	rky	rocky.	surf	surface townet.
gn	green.	rot	rotten.	4′ Blk	4-foot Blake beam trawl.
gy	gray.	s	sand.	5½′ Blk	5½-foot Blake beam trawl.
hrd	hard.	sft	soft.	8′ Tnr	8-foot Tanner beam trawl.
lav	lava.	sh	shells.		

DREDGING AND TRAWLING RECORDS.

Record of dredging and trawling stations of the Albatross, 1883–1900.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Atlantic Ocean, Cape Hatteras to Cape May.						
	1883.	° ′ ″	° ′ ″	° F.	° F.	*Fms*		
a 2001	Mar. 22	37 46 30	74 00 00	----	----	519	gn. m	Deep-sea trawl.
2002	Mar. 23	37 20 42	74 17 36	48	----	641	gn. m	Beam trawl.
2003	Mar. 23	37 16 30	74 20 36	50	----	641	----	Do.
2004	Mar. 23	37 19 45	74 26 06	51	----	102	gn. m., sh	Do.
2005	Mar. 23	37 18 11	74 27 36	50	----	82	bu. m. and s., brk. sh	Do.
2006	Mar. 23	37 19 11	74 26 06	50	----	512	bu. m., fne. s	Do.
2007	Apr. 27	35 17 00	75 13 00	56	68	15	fne. s	Do.
2008	Apr. 27	35 09 40	75 04 36	72	74½	92	bu. m., fne. s	Do.
2009	Apr. 28	35 29 35	74 46 45	69	----	531	----	Deep-sea trawl.
2010	Apr. 28	35 30 00	74 44 45	61	----	890	----	Do.
2011	Apr. 30	36 38 30	74 40 10	48	----	81	s. and brk. sh	Beam trawl.
2012	Apr. 30	36 41 15	74 39 50	52	----	66½	----	Rake dredge.
2013	Apr. 30	36 45 30	74 25 30	48	----	888½	gn. m	Beam trawl.
2014	May 1	36 41 05	74 38 55	47	----	373	gn. m., fne. s	Do.
2015	May 5	37 31 00	74 53 30	48	----	19	fne. s and sh	Do.
2016	May 5	37 31 00	74 52 36	47	45½	19	fne. s. and sh	Do.
2017	May 5	37 30 48	74 51 24	46½	45½	18	fne. s. and sh	Rake dredge.
2018	May 7	37 12 22	74 20 04	54	39	788	bu. m	Deep-sea trawl.
2019	May 7	37 13 52	74 23 52	52¾	39	600	bu. m	Do.
2020	May 21	37 37 50	74 15 30	54	----	143	bu. m., fne. s	Beam trawl.
2021	May 21	37 36 00	74 15 00	54	45	179	bu. m., fne. s	Do.
2022	May 21	37 32 00	74 13 20	52	40	487	bu. m	Deep-sea trawl.
2023	May 21	37 48 00	74 01 30	56	----	377	blk. m., fne. s	Beam trawl.
		Cape May to Nantucket.						
2024	May 25	40 02 10	70 27 00	49	40½	222	dk. gn. m	Beam trawl.
2025	May 25	40 02 00	70 27 00	49	40½	239	gn. m., fne. s	Do.
2026	May 25	40 04 00	70 28 50	49	48	131	gn. m. and s	Do.
2027	May 25	39 58 25	70 37 00	52	43	198	bu. m. and s	Do.
2028	May 25	39 57 50	70 32 00	52	41	209	bu. m	Do.
2029	May 25	39 42 00	70 47 00	53	38½	1,168	gy. m	Dredge tangles.
2030	May 26	39 29 45	71 43 00	49	----	588	bu. m	Beam trawl.
2031	May 26	39 29 00	72 19 55	50	49½	74	gy. m., blk. and wh. s	Do.
2032	May 26	39 29 00	72 19 40	50	47½	74	gn. m , fne. s., blk. sp	Do.
2033	May 26	39 32 30	72 18 35	49¾	41	379	gn. m	Do.
2034	July 17	39 27 10	69 56 20	72	38	1,346	glob. oz	Do.
2035	July 17	39 26 16	70 02 37	71	----	1,362	glob. oz	Do.
2036	July 18	38 52 40	69 24 40	76	38	1,735	glob. oz	Do.
2037	July 18	38 53 00	69 23 30	76	38	1,731	glob. oz	Do.
2038	July 26	38 30 30	69 08 25	76½	----	2,033	glob. oz	Deep sea trawl.
2039	July 28	38 19 26	68 20 20	81	----	2,369	glob. oz	Do.
2040	July 29	38 35 13	68 16 00	76	----	2,226	glob. oz	Do.
2041	July 30	39 22 50	68 25 00	72	38	1,608	glob. oz	Do.
2042	July 30	39 33 00	68 26 45	71	38½	1,555	glob. oz	Do.
2043	July 30	39 49 00	68 28 30	72	38½	1,467	glob. oz	Do.
2044	July 31	40 00 30	68 37 20	72	39	1,067	oz	Do.
2045	July 31	40 04 20	68 43 50	72	40	373	bu. m., fne. sh	Beam trawl.
2046	July 31	40 02 49	68 49 00	72	40	407	bu. m	Do.
2047	July 31	40 02 30	68 49 40	72	52	389	bu. m	Deep-sea trawl.
2048	July 31	40 02 00	68 50 30	72	29	547	crs. s., m., and g	Do.
2049	Aug. 1	39 43 40	69 20 00	71	39	1,025	bu. m	Do.
2050	Aug. 1	39 42 50	69 21 20	72	44½	1,050	glob. oz	Beam trawl.
2051	Aug. 1	39 41 00	69 20 20	72	39	1,106	bu. m. and glob. oz	Do.
2052	Aug. 1	39 40 05	69 21 25	73	45	1,098	glob. oz	Do.
		Nantucket to Cape Sable, N. S.						
2053	Aug. 29	42 02 00	68 27 00	61	----	105	bu. m	Beam trawl.
2054	Aug. 29	42 03 30	68 26 00	64	----	105	bu. m	Dredge.
2055	Aug. 30	42 32 00	68 17 00	60	----	99.5	bu. m., s., and crs. g.	Do.
2056	Aug. 30	42 01 30	68 01 00	57	----	97	bu. m., fne. s., and crs. g.	Do.
2057	Aug. 30	42 01 00	68 00 30	57	----	86	crs. s., blk. sp., brk. sh	Beam trawl.
2058	Aug. 30	41 57 30	67 58 00	58	50	35	gy. s	Do.
2059	Aug. 31	42 05 00	66 46 15	55	----	41	bu. m. and s	Do.
2060	Aug. 31	42 10 00	66 46 15	55	----	123	gy. s., blk. sp., brk. sh	Do.
2061	Aug. 31	42 10 00	66 47 45	54	40	115	gy. s., blk. sp., bu. m.	Do.
2062	Aug. 31	42 17 00	66 37 15	61	42	150	s. and g	Do.
2063	Aug. 31	42 23 00	66 23 00	57⅓	46	141	s. and crs. g	Do.
2064	Aug. 31	42 25 40	66 08 35	56	----	122	crs. s. and g	Do.
2065	Aug. 31	42 27 00	66 00 45	55	44½	80	s., g., and brk. sh	Rake dredge.

a First dredging station occupied by the *Albatross*.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Nantucket to Cape Sable, N. S.						
	1883.	° ′ ″	° ′ ″	°*F.*	°*F.*	*Fms.*		
2066	Sept. 1	42 19 40	65 49 30	54	43.5	65	s., st., and g	Rake dredge.
2067	Sept. 1	42 15 25	65 48 40	56	46	122	s. and g	Beam trawl.
2068	Sept. 1	42 03 00	65 48 40	56	42	131	s., fne. g., and c	Do.
2069	Sept. 1	41 54 50	65 48 35	56½	42	101	s., st., g., p. and c	Grapnel dredge.
2070	Sept. 1	41 55 30	65 47 10	57	42.5	113	p. and c	Bar and tangles.
2071	Sept. 1	41 56 20	65 48 40	57	------	113	p. and c	Grapnel dredge.
2072	Sept. 2	41 53 00	65 35 00	56	39	858	gy. m	Beam trawl.
2073	Sept. 2	41 54 15	65 39 00	58	40	586.5	gy. s	Do.
2074	Sept. 3	41 43 00	65 21 50	69	40	1,309	m. and st	Do.
2075	Sept. 3	41 40 30	65 35 00	58	39	855	glob. oz	Do.
2076	Sept. 4	41 13 00	66 00 50	69	------	906	bu. m	Do.
2077	Sept. 4	41 09 40	66 02 20	68	39	1,255	bu. m	Do.
2078	Sept. 4	41 11 30	66 12 20	66	40	499	gy. m. and s	Do.
2079	Sept. 4	41 13 00	66 19 50	67½	45	75	wh. s	Do.
2080	Sept. 4	41 13 00	66 21 50	67½	46	55	gy. s	Do.
2081	Sept. 4	41 10 20	66 30 20	56	46	50	wh. s., blk. sp	Do.
2082	Sept. 4	41 09 50	66 31 50	55	46.5	49	crs. yl. s	Do.
2083	Sept. 5	40 26 40	67 05 15	72	40	959	gy. m	Do.
2084	Sept. 5	40 16 50	67 05 15	78½	40	1,290	bu. m. and s	Do.
2085	Sept. 20	40 05 00	70 34 45	68	50	70	bu. m	Do.
2086	Sept. 20	40 05 05	70 35 00	67	52.5	69	bu. m., gy. s	Do.
2087	Sept. 20	40 06 50	70 34 15	67	50	65	gn. m., wh. s	Do.
2088	Sept. 20	39 59 15	70 36 30	68	48	143	yl. s	Do.
2089	Sept. 20	39 58 50	70 39 40	69	45	168	gy. s	Do.
2090	Sept. 20	39 59 40	70 41 10	68	48.5	140	gy. s., brk. sh	Do.
		Cape Hatteras to Nantucket.						
2091	Sept. 21	40 01 50	70 59 00	69	49	117	gn. m	Beam trawl.
2092	Sept. 21	39 58 35	71 00 30	67½	45	197	gn. m	Do.
2093	Sept. 21	39 42 50	71 01 20	69	39	1,000	foraminifera, s., m	Do.
2094	Sept. 21	39 44 30	71 04 00	68	38.5	1,022	foraminifera, s., m	Do.
2095	Sept. 30	39 29 00	70 58 40	69½	------	1,342	glob. oz	Do.
2096	Sept. 30	39 22 20	70 52 20	69	37.5	1,451	glob. oz	Do.
2097	Oct. 1	37 56 20	70 57 30	72½	------	1,917	glob. oz	Do.
2098	Oct. 1	37 40 30	70 37 30	72½	------	2,221	glob. oz	Do.
2099	Oct. 2	37 12 20	69 39 00	82	------	2,949	glob. oz	Do.
2100	Oct. 3	39 22 60	68 34 30	69	37.5	1,628	glob. oz	Do.
2101	Oct. 3	39 18 30	68 24 00	67	37	1,686	glob. oz	Do.
2102	Nov. 5	38 44 00	72 38 00	62½	39	1,209	glob. oz	Do.
2103	Nov. 5	38 47 20	72 37 00	62	39	1,091	glob. oz	Do.
2104	Nov. 5	38 48 00	72 40 30	63	41.5	991	bu. m	Do.
2105	Nov. 6	37 50 00	73 03 50	63	41	1,395	glob. oz	Do.
2106	Nov. 6	37 41 20	73 03 20	63	42.5	1,497	glob. oz	Do.
2107	Nov. 9	35 19 30	75 15 20	76	------	16.5	fne. dk. gy. s., small sh.	Do.
2108	Nov. 9	35 16 00	75 02 30	78½	66	48	bu. m., crs. s	Do.
2109	Nov. 9	35 14 20	74 59 10	76	50.5	142	bu. m	Do.
2110	Nov. 9	35 12 10	74 57 15	75½	40	516	bu. m	Do.
2111	Nov. 9	35 09 50	74 57 40	76	------	938	gn. m	Do.
2112	Nov. 10	35 20 50	75 18 00	70	73.5	15.5	s., blk. sp	Do.
2113	Nov. 10	35 20 30	75 19 00	70	72.5	15	m., blk. s	Do.
2114	Nov. 10	35 20 00	75 20 00	70	72	14	m., blk. s	Do.
2115	Nov. 11	35 49 30	74 34 45	78	39	843	m., fne. s	Do.
2116	Nov. 11	35 45 23	74 31 25	77	39	888	bu. m., fne. s	Do.
	1884.	*Caribbean Sea.*						
2117	Jan. 27	15 24 40	63 31 30	78	39.75	683	yl. m. fne. s	L. B. T.
2118	Jan. 28	13 32 40	62 54 00	77	------	690	gy. m. bk. s	Do.
2119	Jan. 29	11 48 30	62 17 30	77	39.25	1,140	gy. m	Do.
2120	Jan. 30	11 07 00	62 14 30	76	------	73	bu. m	Dr. Tgl.
2121	Feb. 3	10 37 40	61 42 40	77	67	31	dk. slate col. m	L. B. T.
2122	Feb. 3	10 37 00	61 44 22	77	73	34	dk. slate-col. m	Do.
2123	Feb. 3	10 42 02	61 48 48	78	64.5	117	bu. m	Do.
2124	Feb. 18	11 34 30	69 02 10	74	59.5	122	fne. sh. gn. m	Sh. Dr.
2125	Feb. 18	11 43 00	69 09 30	74	50.7	208	yl. m. s. bk. sp	S. B. T.
2126	Feb. 19	13 17 45	70 01 00	77	39.3	1,701	yl. m. crs. s. for	Do.
2127	Feb. 25	19 45 00	75 04 00	77	------	1,639	gn. m	L. B. T.
2128	Feb. 27	19 55 46	75 49 23	78	49.5	400	bu. m. fne. s	Tgl. bar.
2129	Feb. 27	19 56 04	75 48 55	78	------	274	bu. m. fne. s	Do.
2130	Feb. 27	19 56 25	75 49 49	79	------	175	gy. m. s. brk. sh	Do.
2131	Feb. 27	19 56 44	75 50 49	79	------	202	hrd. crs. s	Do.
2132	Feb. 27	19 55 38	75 49 16	79	------	478	yl. m. brk. sh	Do.
2133	Feb. 27	19 55 55	75 48 03	79	------	290	wh. s. brk. sh	Do.
2134	Feb. 27	19 56 06	75 47 32	78	------	254	------	Do.
2135	Feb. 27	19 55 58	75 47 07	77	------	250	hrd. co	Do.
2136	Feb. 29	17 43 40	75 38 25	78	------	52	co. brk. sh	Do.
2137	Feb. 29	17 44 50	75 39 20	78	------	47	co. brk. sh	Do.
2138	Feb. 29	17 44 05	75 39 00	78	------	23	co. brk. sh	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Caribbean Sea.						
	1884.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
2139	Mar. 11	17 52 00	76 45 30	79	62.3	215	bk. m	Tgl. bar.
2140	Mar. 11	17 36 10	76 46 05	78	39.7	966	s	S. B. T.
2141	Mar. 12	17 25 00	75 59 55	77	-------	5	co. s	Tgl. bar.
2142	Mar. 25	9 30 15	76 20 30	81	-------	42	gn. m. s	S. B. T.
2143	Mar. 23	9 30 45	76 25 30	80	-------	155	gn. m	Do.
2144	Mar. 25	9 49 00	79 31 30	79	-------	896	gn. m	L. B. T.
2145	Apr. 2	9 27 00	79 54 00	79	-------	25	gn. m. brk. sh	Sh. Dr.
2146	Apr. 2	9 32 00	79 54 30	79	-------	34	brk. sh	L. B. T.
2147	Apr. 2	9 32 20	79 54 45	79	78.5	34	co	Tgl. bar.
2148	Apr. 2	9 35 00	79 55 30	79	78.25	130	hrd	Do.
2149	Apr. 4	13 01 30	81 25 00	78	39.7	992	yl. m	Do.
2150	Apr. 9	13 34 45	81 21 10	78	45.75	382	wh. crs. s	Dr. and Tgl. bar.
2151	Apr. 10	15 28 39	80 36 00	78	40.2	653	yl. for. oz	L. B. T.
		Off Havana, Cuba.						
2152	Apr. 30	2½ miles NW. of Havana Light.		77	49	387	co	Tgl. bar
2153	Apr. 30	23 10 19	82 23 10	77	55.8	283	co	Do.
2154	Apr. 30	23 10 16	82 22 54	77	59.6	310	co	Do.
2155	Apr. 30	23 10 21	82 22 44	77	-------	300	co	Do.
2156	Apr. 30	23 10 35	82 21 55	77	59.8	278	co	Do.
2157	Apr. 30	23 10 04	82 21 07	77	-------	29	-------	Do.
2158	Apr. 30	23 10 25	82 20 36	77	-------	86	-------	Do.
2159	Apr. 30	23 10 39	82 20 08	77	-------	98	co	Do.
2160	Apr. 30	23 10 31	82 20 37	77	-------	167	co	Do.
2161	Apr. 30	23 10 36	82 20 28	78	-------	146	co	Do.
2162	Apr. 30	23 10 30	82 20 25	78	-------	122	co	Do.
2163	Apr. 30	23 10 31	82 20 29	78	-------	133	co	Do.
2164	May 1	23 10 39	82 20 29	77	-------	192	co	Do.
2165	May 1	23 10 39	82 20 28	77	-------	200	co	Do.
2166	May 1	23 10 36	82 20 30	77	71.9	196	co	Do.
2167	May 1	23 10 40	82 20 30	78	-------	201	co	Do.
2168	May 1	23 10 36	82 20 20	78	-------	122	co	Do.
2169	May 1	23 10 28	82 20 27	78	-------	78	co	Do.
		Cape Hatteras to Nantucket.						
2170	July 20	37 57 00	73 53 30	71	-------	155	gy. s	Tgl. bar.
2171	July 20	37 59 30	73 48 40	75	39.5	444	gn. m	Do.
2172	July 20	38 01 15	73 44 00	76	39	568	gn. m	Do.
2173	July 21	37 57 00	72 34 00	70	37	1,600	glob. oz	Do.
2174	July 21	38 15 00	72 03 00	76	-------	1,594	gy. m	Do.
2175	July 22	39 33 00	72 18 30	68	40.5	452	gn. m	Do.
2176	July 22	39 32 30	72 21 30	68	41	302	bk. m	S. B. T.
2177	July 22	39 33 40	72 08 45	68	52	87	gn. m. s	L. B. T.
2178	July 22	39 29 00	72 05 15	68	42.3	229	gn. m. s	Do.
2179	July 23	39 30 10	71 50 00	67	39.5	510	bk. m	Do.
2180	July 23	39 29 50	71 49 30	68	39.5	523	bk. m	Do.
2181	July 23	39 29 00	71 46 00	68	39	693	gy. m. fne. s	Do.
2182	July 23	39 25 30	71 44 00	68	39	861	gn. m	Do.
2183	Aug. 2	39 57 45	70 56 30	68	44.5	195	gn. m. s	Do.
2184	Aug. 2	40 00 15	70 55 30	70	48.9	136	gn. m. s	Do.
2185	Aug. 2	40 00 45	70 54 15	69	51	129	gn. m. s	Do.
2186	Aug. 2	39 52 15	70 55 30	69	39.7	353	gn. m. s	Do.
2187	Aug. 3	39 49 30	71 10 00	68	39.7	420	gn. m. s	Do.
2188	Aug. 3	39 54 30	71 08 00	70	42.7	235	gn. m. s	Do.
2189	Aug. 4	39 49 30	70 26 00	71	39.7	600	gn. m. s	Do.
2190	Aug. 4	39 40 00	70 20 15	73	-------	1,180	glob. oz	Do.
2191	Aug. 4	39 45 30	70 17 00	73	-------	961	gn. m	Lost trawl.
2192	Aug. 5	39 46 30	70 14 45	72	38.6	1,060	gy. oz	L. B. T.
2193	Aug. 5	39 44 30	70 10 30	73	38.4	1,122	gn. m	Do.
2194	Aug. 5	39 43 45	70 07 00	74	38.4	1,140	oz	Do.
2195	Aug. 5	39 44 00	70 03 00	74	38.4	1,058	gn. m	Do.
2196	Aug. 6	39 35 00	69 44 00	74	38	1,230	gn. m	Do.
2197	Aug. 6	39 56 30	69 43 20	74	52.3	84	s. brk. sh	Do.
2198	Aug. 6	39 56 30	69 43 20	74	52.3	84	s. brk. sh	Do.
2199	Aug. 6	39 57 30	69 41 10	74	-------	78	gy. s	Do.
2200	Aug. 6	39 53 30	69 43 20	74	45	148	crs. s. bk. sp	Do.
2201	Aug. 19	39 39 45	71 35 15	66	39.5	538	bu. m	Do.
2202	Aug. 19	39 38 00	71 39 45	67	39.1	515	gn. m	Do.
2203	Aug. 19	39 34 15	71 41 15	74	38.9	705	gn. m. s	Do.
2204	Aug. 19	39 30 30	71 44 30	74	39.1	728	br. m	Do.
2205	Aug. 20	39 35 00	71 18 45	73	38.1	1,073	gy. oz	Do.
2206	Aug. 20	39 35 00	71 24 30	74	38.4	1,043	gn. m	Do.
2207	Aug. 20	39 35 33	71 31 45	74	38.6	1,061	gn. m	Do.
2208	Aug. 21	39 33 00	71 16 15	74	38.4	1,178	gn. m	Do.
2209	Aug. 21	39 34 45	71 31 30	74	39.5	1,080	gn. m. s	Do.
2210	Aug. 21	39 37 45	71 18 45	74	38.1	991	glob. oz	Do.
2211	Aug. 21	39 35 00	71 18 00	74	38.3	1,064	gy. oz	Do.
2212	Aug. 22	39 59 30	70 30 45	71	40	428	gn. m	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position.		Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Lat. N.	Long. W.					
		Cape Hatteras to Nantucket.						
	1884.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
2213	Aug. 22	39 58 30	70 30 00	71	39.5	384	gn. m	L. B. T.
2214	Aug. 22	39 57 00	70 32 00	74	39.5	475	gn. m	Do.
2215	Aug. 22	39 49 15	70 31 45	74		578	lost ther	Do.
2216	Aug. 22	39 47 00	70 30 30	71	39.5	963	gn. m	Do.
2217	Aug. 23	39 47 20	69 34 15	73	38.1	924	gy. m	Do.
2218	Aug. 23	39 46 22	69 29 00	74	38.8	948	gy. m	
2219	Aug. 23	39 46 22	69 29 00	74	38.8	948	gy. m	
2220	Aug. 23	39 43 30	69 23 00	74	38.3	1,054	gy. m	
2221	Sept. 6	39 05 30	70 44 30	75	36.9	1,525	gy. oz	
2222	Sept 6	39 03 15	70 50 45	73	36.9	1,537	gy. oz	
2223	Sept. 7	37 48 30	69 43 30	75	36.4	2,516	glob. oz	
2224	Sept. 8	36 16 30	68 21 00	79	36.8	2,574	glob. oz	
2225	Sept. 9	36 05 30	69 51 45	78	36.7	2,512	yl. oz	
2226	Sept. 10	37 00 00	71 54 00	80	36.8	2,045	glob. oz	
2227	Sept. 10	36 55 23	71 55 00	82	36.8	2,109	glob. oz	Lost trawl.
2228	Sept. 11	37 25 00	73 06 00	77	36.8	1,582	br. m	L. B. T.
2229	Sept. 11	37 38 40	73 16 30	75	37.7	1,423	glob. oz	Do.
2230	Sept. 12	38 27 00	73 02 00	75	36.8	1,168	gy. oz	Do.
2231	Sept. 12	38 29 00	73 09 00	75	36.8	965	gy. oz	Do.
2232	Sept. 12	38 37 30	73 11 00	74	42.8	243	gn. m	Do.
2233	Sept. 12	38 36 30	73 06 00	73	39.2	630	gn. m	Do.
2234	Sept. 13	39 09 00	72 03 15	69	38.6	810	gn. m	Do.
2235	Sept. 13	39 12 00	72 03 30	72	38.8	707	gn. m	Do.
2236	Sept. 13	39 11 00	72 08 30	72	39.5	636	gn. m	Do.
2237	Sept. 13	39 12 17	72 09 30	72	39.5	520	gn. m	Do.
2238	Sept. 13	39 06 00	72 10 00	72	38.7	904	gy. m	Do.
2239	Sept. 26	40 38 00	70 29 45	62		32	gn. m	Do.
2240	Sept. 26	40 27 30	70 29 00	61		44	gn. m	Do.
2241	Sept. 26	40 21 00	70 29 15	63	51.4	50	gn. m	Do.
2242	Sept. 26	40 15 30	70 27 00	63	51.4	58	gn. m	Do.
2243	Sept. 26	40 10 15	70 26 00	64	52.4	63	gn. m	Do.
2244	Sept. 26	40 05 15	70 23 00	71	52.9	67	gn. m. s	Do.
2245	Sept. 26	40 01 15	70 22 00	61	50.9	98	gn. m. bk. s	Do.
2246	Sept. 26	39 56 45	70 20 30	71	48.8	122	gn. m	Do.
2247	Sept. 27	40 03 00	69 57 00	70	51.9	78	gn. m. s	Do.
2248	Sept. 27	40 07 00	69 57 00	70	52.4	67	gn. m. bk. s	Do.
2249	Sept. 27	40 11 00	69 52 00	70	51.4	53	gn. m. fne. s	Do.
2250	Sept. 27	40 17 15	69 51 45	68	51.4	47	gn. m. fne. s	Do.
2251	Sept. 27	40 22 17	69 51 30	65	50.9	43	gn. m. fne. s	Do.
2252	Sept. 27	40 28 00	69 51 00	63	50.3	38	gn. m. fne. s	Do.
2253	Sept. 27	40 34 30	69 50 45	61	52.9	32	gy. s. bk. sp	Do.
2254	Sept. 27	40 40 30	69 50 30	61	54.4	25	gy. s. bk. sp	Do.
2255	Sept. 27	40 46 30	69 50 15	60	55.9	18	fne. s. bk. sp	Do.
2256	Sept. 28	40 38 30	69 29 00	61	52.9	30	yl. s	Do.
2257	Sept. 28	40 32 30	69 29 00	61	51.9	33	yl. s. bk. sp	Do.
2258	Sept. 28	40 26 00	69 29 00	61	51.2	36	gy. s. bk. sp	Do.
2259	Sept. 28	40 19 30	69 29 10	61	50.2	41	gy. s. bk. sp	Do.
2260	Sept. 28	40 13 15	69 29 15	65	50.2	46	gy. s	Do.
2261	Sept. 28	40 04 00	69 29 30	66	53.9	58	gy. s. bk. sp	Do.
2262	Sept. 28	39 54 45	69 29 45	67	41.6	250	gn. m. s	Do.
2263	Oct. 18	37 08 00	74 33 00	66		430	gn. m	Do.
2264	Oct. 18	37 07 50	74 34 20	66	46.8	167	gy. s	Do.
2265	Oct. 18	37 07 40	74 35 40	67	57.9	70	gn. m. g	Do.
2266	Oct. 19	35 07 00	75 08 30	78	62.8	111	fne. s. bk. sp	S. B. T.
2267	Oct. 19	35 08 50	75 07 20	79	72.8	68	gy. m	Tgl. bar.
2268	Oct. 19	35 10 40	75 06 10	79	71.3	68	gy. m	Do.
2269	Oct. 19	35 12 30	75 05 00	75	77	48	crs. gy. bk. s	Do.
2270	Oct. 19	35 14 15	75 07 00	75	76.3	32	fne. gy. s. bk. sp	D. S. dredge.
2271	Oct. 19	35 16 00	75 09 00	75		26	crs. gy. s. bk. sp	S. B. T.
2272	Oct. 19	35 20 10	75 14 00	75		15	gy. s. bk. sp	Do.
2273	Oct. 19	35 20 30	75 17 30	72	72.3	17	gy. s. brk. sh	Do.
2274	Oct. 19	35 20 35	75 18 05	71		16	gy. s. brk. sh	Dr. S. dredge.
2275	Oct. 19	35 20 40	75 18 40	71		16	gy. s. brk. sh	Dr. & M. B.
2276	Oct. 19	35 20 45	75 19 15	71		16	gy. s. brk. sh	Do.
2277	Oct. 19	35 20 50	75 19 50	71		16	gy. s. brk. sh	Do.
2278	Oct. 19	35 20 55	75 20 20	71		16	gy. s. brk. sh	L. B. T.
2279	Oct. 19	35 20 55	75 20 55	71		16	gy. s. brk. sh	Do.
2280	Oct. 19	35 21 00	75 21 30	70		16	gy. s. brk. sh	Do.
2281	Oct. 19	35 21 05	75 22 05	70		16	gy. s. brk. sh	Do.
2282	Oct. 19	35 21 10	75 22 40	70		14	bk. s	Do.
2283	Oct. 19	35 21 15	75 23 15	70		14	gy. s	Do.
2284	Oct. 19	35 21 20	75 23 50	70		13	crs. gy. s	Do.
2285	Oct. 19	35 21 25	75 24 25	70		13	crs. gy. s	Do.
2286	Oct. 19	35 21 30	75 25 00	70		11	crs. gy. s	Do.
2287	Oct. 20	35 22 30	75 26 00	69		7	crs. gy. s	Do.
2288	Oct. 20	35 22 40	75 25 30	69		7	crs. s. brk. sh	Do.
2289	Oct. 20	35 22 50	75 25 00	69		7	crs. s. bk. sp	Do.
2290	Oct. 20	35 23 00	75 24 30	69		9¾	s. brk. sh	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Cape Hatteras to Nantucket.						
	1884.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
2291	Oct. 20	35 25 30	75 20 30	69	.....	15	gy. s. brk. sh	L. B. T.
2292	Oct. 20	35 27 20	75 16 30	70	.....	17	gy. s. brk. sh	Do.
2293	Oct. 20	35 29 10	75 12 30	71	.....	18	crs. s. bk. sp	Do.
2294	Oct. 20	35 31 00	75 08 30	71	.....	19	crs. gy. s	Do.
2295	Oct. 20	35 32 41	75 04 30	73	.....	22	crs. gy. s	Do.
2296	Oct. 20	35 35 20	74 58 45	71	.....	27	crs. gy. s	Do.
2297	Oct. 20	35 38 00	74 53 00	73	.....	49	bk. m. brk. sh	Do.
2298	Oct. 20	35 39 00	74 52 00	73	.....	80	bk. m. brk. sh	Do.
2299	Oct. 20	35 40 00	74 51 30	73	.....	296	bk. m	Do.
2300	Oct. 20	35 41 30	74 48 30	71	.....	671	bk. m	Do.
2301	Oct. 21	35 11 30	75 05 00	77	75	59	crs. s. bk. sp	Tgl. bar.
2302	Oct. 21	35 14 00	75 03 00	77	71.4	49	s. co	Do.
2303	Oct. 21	35 17 00	75 01 00	77	.....	41	fne. gy. and bk. s	S. B. T.
2304	Oct. 21	35 19 00	74 58 00	77	.....	37	fne. gy. and bk. s	Do.
2305	Oct. 21	35 23 00	74 51 30	79	66.2	58	fne. gy. and bk. s	Do.
2306	Oct. 21	35 21 30	74 52 00	79	41.7	322	gy. m	L. B. T.
2307	Oct. 21	35 42 00	74 54 30	70	57.3	43	gy. and bk. s	Do.
2308	Oct. 21	35 43 00	74 53 30	71	.....	45	gy. and bk. s	Do.
2309	Oct. 21	35 43 30	74 52 00	71	.....	56	gy. s. brk. sh	Do.
2310	Oct. 21	35 44 00	74 51 00	71	.....	132	bk. m. fne. s	Do.
		Charleston to Savannah.						
	1885.							
2311	Jan. 5	32 55 00	77 54 00	72	59.1	79	crs. s. bk. sp	L. B. T.
2312	Jan. 5	32 54 00	77 53 30	73	57.8	88	crs. s. bk. sp	Do.
2313	Jan. 5	32 53 00	77 53 00	73	57.2	99	crs. s. bk. sp. brk. sh	Do.
2314	Jan. 5	32 43 00	77 51 00	69	47.4	159	crs. s. bk. sp. brk. sh	Do.
		Havana, Cuba, to Yucatan.						
2315	Jan. 15	24 26 00	81 48 15	75	.....	37	co	L. B. T.
2316	Jan. 15	24 25 30	81 47 45	75	74	50	.....	Do.
2317	Jan. 15	24 25 45	81 46 45	75	75	45	co	Do.
2318	Jan. 15	24 25 45	81 46 00	75	75	45	co	Do.
2319	Jan. 17	23 10 37	82 20 06	76	.....	143	gy. co	Tgls.
2320	Jan. 17	23 10 39	82 18 48	76	.....	130	fne. co	Do.
2321	Jan. 17	23 10 54	82 18 00	77	.....	230	fne. gy. s	Do.
2322	Jan. 17	23 10 54	82 17 45	77	.....	115	co	Do.
2323	Jan. 17	23 10 51	82 19 03	78	.....	163	wh. br. co	Do.
2 24	Jan. 17	23 10 25	82 20 24	78	79.1	33	co	Do.
2325	Jan. 17	23 10 48	82 19 54	78	.....	170	lt. br. co	Do.
2326	Jan. 17	23 11 45	82 18 54	78	62	194	br. co	Do.
2327	Jan. 17	23 11 45	82 17 54	76	.....	182	fne. br s	Do.
2328	Jan. 17	23 11 03	82 19 15	75	58	203	fne. gy. co	Do.
2329	Jan. 17	23 11 03	82 18 45	75	.....	118	wh. co	Do.
2330	Jan. 17	23 10 48	82 19 15	75	.....	121	fne. gy. co	Do.
2331	Jan. 17	23 10 31	82 19 55	75	.....	114	co	Do.
2332	Jan. 19	23 10 38	82 20 06	75	.....	156	wh. gy. co	Do.
2333	Jan. 19	23 10 36	82 19 12	75	.....	169	fne. wh. co	Do.
2334	Jan. 19	23 10 42	82 18 24	75	.....	67	wh. co	Do.
2335	Jan. 19	23 10 39	82 20 21	77	.....	204	.....	Do.
2336	Jan. 19	23 10 48	82 18 52	77	.....	157	co	Do.
2337	Jan. 19	23 10 39	82 20 21	78	.....	199	co	Do.
2338	Jan. 19	23 10 40	82 20 15	78	.....	189	co	Do.
2339	Jan. 19	23 10 40	82 20 15	78	.....	191	co	Do.
2340	Jan. 19	23 10 47	82 20 06	78	.....	234	co	Do.
2341	Jan. 19	23 11 00	82 19 06	78	.....	143	co	Do.
2342	Jan. 19	23 10 39	82 20 21	78	.....	201	co	Do.
2343	Jan. 19	23 11 35	82 19 25	78	.....	279	fne. co	Do.
2344	Jan. 19	23 10 39	82 20 21	78	.....	199	br. co	Do.
2345	Jan. 20	23 10 40	82 20 15	78	.....	184	fne. gy. wh. co	Do.
2346	Jan. 20	23 10 39	82 20 21	78	.....	200	co	Do.
2347	Jan. 20	23 10 39	82 20 21	78	.....	216	co	Do.
2348	Jan. 20	23 10 39	82 20 21	78	.....	211	co	Do.
2349	Jan. 20	23 10 40	82 20 15	78	.....	182	co	Do.
2350	Jan. 20	23 10 39	82 20 21	78	.....	213	co	S. B. T.
2351	Jan. 21	22 41 00	84 16 30	77	.....	426	.....	L. B. T.
2352	Jan. 21	22 35 00	84 23 00	77	45	463	wh. co	Do.
2353	Jan. 22	20 59 00	86 23 00	79	62.8	167	co	Tgls.
2354	Jan. 22	20 59 30	86 23 45	78	.....	130	co	S. B. T.
2355	Jan. 22	20 56 48	86 27 00	78	.....	399	yl. oz	Do.
2356	Jan. 29	20 18 50	87 03 00	78	.....	137	fne. wh. co	Tgls.
2357	Jan. 29	20 19 00	87 03 10	78	.....	178	wh. co	Do.
2358	Jan. 29	20 19 00	87 03 30	78	.....	222	fne. wh. co	S. B. T.
2359	Jan. 29	20 19 10	87 03 30	78	50.8	231	wh. co	Do.
2360	Jan. 30	22 08 30	86 49 00	78	.....	26	wh. co	Tgls.
2361	Jan. 30	22 08 15	86 51 15	78	.....	25	co. s	S. B. T.
2362	Jan. 30	22 08 30	86 53 30	78	.....	25	co. s	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Havana, Cuba, to Yucatan.						
	1885.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
2363	Jan. 30	22 07 30	87 06 00	77		21	wh r. co	S. B. T.
2364	Jan. 30	22 08 40	87 06 00	77		22	co. s	Do.
2365	Jan. 30	22 18 00	87 04 00	77		24	wh. r. co	Do.
2366	Jan. 30	22 28 00	87 02 00	76		27	fne. wh. co	Do.
2367	Jan. 30	22 38 00	87 00 00	76		124	wh. co	Do.
		Gulf of Mexico.						
2368	Feb. 7	29 15 00	85 32 00	64		28	crs. gy. s. brk. sh	Tgls.
2369	Feb. 7	29 16 30	85 32 00	64		26	crs. gy. s. brk. sh	L. B. T.
2370	Feb. 7	29 18 15	85 32 00	64		25	crs. gy. s. brk. sh	Do.
2371	Feb. 7	29 17 00	85 30 45	66		26	gy. s. brk. sh	Do.
2372	Feb. 7	29 15 30	85 29 30	64		27	g	Do.
2373	Feb. 7	29 14 00	85 29 15	64		25	co	Do.
2374	Feb. 7	29 11 30	85 29 00	65		26	s. g. brk. sh	Do.
2375	Feb. 7	29 10 00	85 31 00	65		30	s. bk. sp. brk. sh	Do.
2376	Feb. 11	29 03 15	88 16 00	62	46.5	324	gy. m	Do.
2377	Feb. 11	29 07 30	88 08 00	63	67	210	gy. m	Do.
2378	Feb. 11	29 14 30	88 09 30	63		68	gy. m	Do.
2379	Mar. 2	28 00 15	87 42 00	66		1,467	yl. oz	Do.
2380	Mar. 2	28 02 30	87 43 45	69	40.1	1,430	br. m	Do.
2381	Mar. 2	28 05 00	87 56 15	69		1,330	lt. br. m	Do.
2382	Mar. 3	28 19 45	88 01 30	62	39.6	1,255	gy. m	Do.
2383	Mar. 3	28 32 00	88 06 00	69	39.8	1,181	br. gn. m	Do.
2384	Mar. 3	28 45 00	88 15 30	67	39.6	940	br. gy. m	Do.
2385	Mar. 3	28 51 00	88 18 00	67	40.1	730	gy. m	Do.
2386	Mar. 4	29 15 00	88 06 00	67	61.8	60	bu. m	Do.
2387	Mar. 4	29 24 00	88 04 00	61		32	s. g. brk. sh	Do.
2388	Mar. 4	29 24 30	88 01 00	61		35	yl. s. bk. sp	Do.
2389	Mar. 4	29 28 00	87 56 00	62		27	gy. s. brk. sh	Do.
2390	Mar. 4	29 27 30	87 48 30	62		30	crs. s. bk. sp. sh	Do.
2391	Mar. 4	29 32 00	87 45 00	59		25	gy. s. bk. sp	Do.
2392	Mar. 13	28 47 30	87 27 00	62	40.7	724	br. gy. m	Do.
2393	Mar. 13	28 43 00	87 14 30	64	41.1	525	lt. gy. m	Do.
2394	Mar. 13	28 38 30	87 02 00	66	41.8	420	gn. m	Do.
2395	Mar. 13	28 36 15	86 50 00	66	44.1	347	gy. m	Do.
2396	Mar. 13	28 34 00	86 48 00	66		335	gy. m	Do.
2397	Mar. 14	28 42 00	86 36 00	65	46.1	280	gy. m	Do.
2398	Mar. 14	28 45 00	86 26 00	67	48.6	227	gy. m	Do.
2399	Mar. 14	28 44 00	86 18 00	68	51.6	196	gy. m	Do.
2400	Mar. 14	28 41 00	86 07 00	67		169	gy. m	Do.
2401	Mar. 14	28 38 30	85 52 30	69		142	gn. m. brk. sh	Do.
2402	Mar. 14	28 36 00	85 33 30	63		111	gy. m	Do.
2403	Mar. 15	28 42 30	85 29 00	65		88	gy. m	Do.
2404	Mar. 15	28 44 00	85 16 00	66		60	gy. s	Do.
2405	Mar. 15	28 45 00	85 02 00	68		30	gy. s. brk. co	Do.
2406	Mar. 15	28 46 00	84 49 00	64		26	crs. s. co	Do.
2407	Mar. 15	28 47 30	84 37 00	63		24	co. brk. sh	Do.
2408	Mar. 16	28 28 00	84 25 00	64		21	co	Do.
2409	Mar. 18	27 04 00	83 21 15	66		26	crs. gy. s. brk. sh	Do.
2410	Mar. 18	26 47 30	83 25 15	66		28	fne wh. s. bk. sp. brk. sh.	Rake dredge.
2411	Mar. 18	26 33 30	83 15 30	67		27	fne. wh. s. bk. sp.	L. B. T.
2412	Mar. 19	26 18 30	83 08 45	66		27	fne gy. s. bk. sp. brk. sh.	Do.
2413	Mar. 19	26 00 00	82 57 30	66		24	fne. s. bk. sp. brk. sh.	Do.
2414	Mar. 19	25 04 30	82 59 15	69		26	fne. wh. s. brk. sh	Do.
		Savannah to Cape Charles.						
2415	Apr. 1	30 44 00	79 26 00	70	45.6	440	co. crs. s. sh. for	L. B. T.
2416	Apr. 1	31 26 00	79 07 00	74	53.8	276	co. brk. sh	Do.
2417	Apr. 2	33 18 30	77 07 00	67	65.8	95	fne. gy. s	Do.
2418	Apr. 2	33 20 00	77 05 00	67	65.8	90	gy. s	Do.
2419	Apr. 2	33 34 00	76 40 30	72	60.3	107	fne. gy. s. bk. sp	Do.
2420	Apr. 5	37 03 20	74 31 40	48	47.7	104	bk. s. m. g	Do.
2421	June 3	37 07 00	74 34 30	61		64	fne. gy. s. p	Do.
2422	June 3	37 08 30	74 33 30	63	52.5	85	crs. gy. s. bk. sp. brk. sh.	Do.
2423	June 3	37 10 15	74 32 00	67		143	gn. m. fne. s	Do.
2424	June 4	36 41 37	74 42 15	67	52.5	85	bk. m	Do.
2425	June 4	36 20 24	74 46 30	69	51.5	119	dk. gy. m. fne. s	Do.
2426	June 4	36 01 30	74 47 30	71	52.0	93	crs. gy. bk. s. brk. sh	Do.
		Off Newfoundland.						
2427	June 23	42 46 00	51 00 00	47	38.7	523	hrd	L. B. T.
2428	June 23	42 48 00	50 55 30	48	38.3	826	gn. m	Do.
2429	June 23	42 55 30	50 51 00	45	38.7	471	gy. m	Do.
2430	June 23	42 58 30	50 50 00	46		179	gn. s. p	Do.
2431	June 23	43 00 00	50 47 30	46	33.5	129	yl. s. bk. sp	Do.
2432	June 23	43 04 00	50 45 00	47		64	fne. gy. s	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Off Newfoundland.						
	1885.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
2433	June 23	43 05 00	50 43 00	48	33	57	gn. s	L. B. T.
2434	June 23	43 08 00	50 40 00	48	34	51	gn. m	Do.
2435	June 23	43 12 00	50 38 45	48	34	47	bk. m	Do.
2436	June 24	43 36 00	50 06 30	49	34	36	wh. s. bk. sp. brk. sh.	Do.
2437	June 24	43 36 00	50 05 00	49	35.8	37	crs. brk. sh. brk. st	Do.
2438	June 24	43 36 00	50 03 30	48	36.8	37	gn. s. bk. sp. brk. sh	Do.
2439	June 24	43 37 00	49 56 30	48	37.8	36	wh. s. bk. sp	Do.
2440	June 24	43 38 00	49 49 30	48	38.3	33	fne. wh. s. bk. sp	Do.
2441	June 25	45 27 00	49 42 00	43	33	34	wh. s. brk. sh	Do.
2442	June 25	45 33 00	49 43 00	44	33.2	36	wh. s. brk. sh	Do.
2443	June 25	45 44 00	49 45 00	46	34.9	35	wh. s. brk. sh	Do.
2444	June 25	45 59 00	49 45 30	45	34.4	39	wh. s. brk. sh	Do.
2445	June 25	46 09 30	49 48 30	44	33.5	39	brk. sh	Do.
2446	June 25	46 20 00	49 52 00	43	35.3	40	brk. sh	Do.
2447	June 25	46 26 00	49 42 00	43	34.8	39	brk. sh	Do.
2448	June 25	46 28 00	49 39 30	43	33.9	40	s. g	Do.
2449	June 25	46 37 00	49 50 30	42	33	39	brk. sh	Do.
2450	June 25	46 45 00	50 02 30	42	31	44	p. brk. sh	Do.
2451	June 26	46 58 00	50 34 00	40	29.7	67	s. sh	S. B. T.
2452	June 26	47 04 00	50 48 00	40	29.7	89	fne. gn. s	L. B. T.
2453	June 26	47 10 00	51 02 00	41	29.7	82	gn. m. fne. s	Do.
2454	June 26	47 16 00	51 16 00	42	29.7	74	fne. gy. s	Do.
2455	June 26	47 21 00	51 38 30	43	30	81	br. s	Do.
2456	July 2	47 29 00	52 18 00	46		86	g	Bl. Dr.
2457	July 2	47 13 00	52 24 00	47	29.5	86	gy. s	Do.
2458	July 2	46 48 30	52 34 00	48	29.5	89	s. gn. m	Do.
2459	July 2	46 23 00	52 45 00	49	29.5	88	crs. gy. s	Do.
2460	July 3	45 50 00	54 06 00	47	30	67	gy. s. sh	Do.
2461	July 3	45 47 00	54 13 30	48	30	59	fne. s. bk. sp	Sh. Dr.
2462	July 3	45 45 30	54 20 30	48	30	41	wh. s. bk. sp	Bl. Dr.
2463	July 3	45 44 00	54 27 00	50	30	45	brk. sh	Do.
2464	July 3	45 40 00	54 41 00	47	32	42	wh. bk. s. brk. sh	Sh. Dr.
2465	July 3	45 35 00	55 01 00	48	30	67	bk. gy. s	Do.
2466	July 3	45 29 00	55 24 00	53	30	67	co	Do.
2467	July 3	45 23 00	55 41 00	52	35.8	38	fne. wh. s. bk. sp	Bl. Dr.
2468	July 3	45 11 30	55 51 30	52	33	42	fne. bk. s	Sh. Dr.
2469	July 4	44 58 37	56 20 45	54	40.5	201	gn. m	L. B. T.
		Off Nova Scotia.						
2470	July 4	44 47 00	56 33 45	54	40.2	224	gy. m	L. B. T.
2471	July 4	44 34 00	56 41 45	53	40.4	218	gy. m. s	Do.
2472	July 4	44 27 30	57 10 45	53	40	137	crs. s. g	Tgls. with grapnels.
2473	July 4	44 27 15	57 10 00	53	40	219	crs. s. brk. sh	Do.
2474	July 4	44 28 30	57 10 45	53	40	133	hrd	Do.
2475	July 4	44 28 30	57 10 00	53		222	yl. s. p	Do.
2476	July 4	44 28 50	57 10 30	53		200	yl. s. p	Do.
2477	July 4	44 29 30	57 11 15	51		114	crs. wh. s. p	L. B. T.
2478	July 5	44 05 30	57 16 30	52		191	fne. yl. s	Tgls.
2479	July 5	44 05 45	57 16 45	52		129	wh. s. p	Do.
2480	July 5	44 06 00	57 16 30	52		189	wh. s. p	Sh. Dr.
2481	July 5	44 07 30	57 16 45	52		116	g	Do.
2482	July 5	44 08 00	57 16 15	52		265	br. m	Do.
2483	July 5	44 16 00	57 12 45	53		175	crs. g	Do.
2484	July 5	44 20 00	57 11 15	54		204	fne. wh. s	Do.
2485	July 5	44 24 00	57 09 50	54		205	fne. wh. s	Do.
2486	July 5	44 26 00	57 11 15	54	39.7	190	crs. s. g	Do.
2487	July 5	44 28 30	57 14 45	54		39	gy. s. g	Do.
2488	July 5	44 35 00	57 13 30	53		150	yl. s	Do.
2489	July 5	44 43 00	57 22 45	53		33	wh. s	Do.
2490	July 6	45 27 30	58 27 45	52		50	g. p	Do.
2491	July 6	45 24 30	58 35 15	53		59	wh. s	Do.
2492	July 6	45 22 00	58 43 45	53	33.3	75	wh. s	Do.
2493	July 6	45 19 00	58 51 15	53	32.3	45	wh. s. brk. sh	Do.
2494	July 6	45 14 30	59 06 45	54	32 5	50	s. g	Tgls.
2495	July 6	45 10 00	59 23 45	54	32.5	44	hrd	Do.
2496	July 6	45 07 30	59 27 45	56	32.2	44	crs. yl. s. p	Do.
2497	July 6	45 04 00	59 36 45	55	33	57	yl. s. brk. sn. hrd	Sh. Dr.
2498	July 6	44 54 00	59 46 45	57		65	fne. br. s	L. B. T.
2499	July 6	44 46 30	59 55 45	57	35.8	130	bk. m	Do.
2500	July 7	44 28 00	60 15 15	58		36	s. g	Do.
2501	July 7	44 27 00	60 20 15	58	38.7	26	s. g	Do.
2502	July 7	44 19 00	60 39 15	57	34.8	54	yl. s	Do.
2503	July 7	44 22 30	61 00 15	60	35	47	p	Do.
2504	July 7	44 23 00	61 22 45	62	40.6	82	bk. m. g	Sh. Dr.
2505	July 7	44 23 30	61 44 15	63	42.3	93	dk. br. m	L. B. T.
2506	July 8	44 26 00	62 10 00	61	43.1	127	dk. br. m	Do.
2507	July 8	44 27 30	62 33 30	61	41.6	80	hrd	Sh. Dr.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Off Nova Scotia.						
	1885.	° ′ ″	° ′ ″	° F.	° F.	Fms.		
2508	July 8	44 28 30	62 56 00	61	39.7	72	br. m	L. B. T.
2509	July 8	44 30 00	63 18 00	61	34.8	43	crs. s	Sh. Dr.
2510	July 11	44 16 00	63 23 00	53	39.2	68	bk. m. brk. sh	Dredge.
2511	July 11	44 05 30	63 31 30	57	41.6	84	br. m	Sh. Dr.
2512	July 11	43 48 00	63 46 30	58	42.6	103	br. m	Do.
2513	July 11	43 34 00	63 56 30	58	43.6	134	gv. oz	S. B. T.
2514	July 11	43 28 30	63 57 30	59	43.1	126	bk. m	Do.
2515	July 12	43 18 30	63 51 30	58	36.3	57	s. g	Sh. Dr.
2516	July 12	43 15 00	63 58 00	58	36.3	52	rky	Do.
2517	July 12	43 10 00	64 18 00	60	38.3	55	yl. s. bk. sp	Do.
2518	July 12	43 05 00	64 40 30	59	38.7	60	st	Do.
2519	July 12	42 51 15	64 49 00	60	39.2	53	hrd	Do.
2520	July 12	42 41 00	64 55 30	60	40.6	62	rky	Do.
2521	July 12	42 30 30	65 02 00	62	42.1	65	s. g	Do.
2522	July 12	42 20 00	65 07 30	61	46.7	104	s. g	S. B. T.
		Cape Sable to Cape May.						
2523	July 13	41 48 30	65 44 30	60	41.6	111	s. g. st	Sh. Dr.
2524	July 13	41 48 45	65 47 00	60	42.6	85	s. g. st	Do.
2525	July 13	41 49 00	65 49 30	60	43.6	72	s. g. brk. sh	Do.
2526	July 13	41 40 45	65 46 00	66		121	p	Do.
2527	July 13	41 59 00	65 35 30	61		117	s. g	(*a*)
2528	July 13	41 47 00	65 37 30	69	38.7	677	br. s	L. B. T.
2529	July 14	41 03 30	66 14 00	65	38.7	662	gy. m	Do.
2530	July 14	40 53 30	66 24 00	67	38.4	956	gy. oz	Do.
2531	July 14	40 42 00	66 33 00	67	38.4	852	gy. m	Do.
2532	July 14	40 34 30	66 48 00	67	38.7	705	gy. m	Do.
2533	July 15	40 16 30	67 26 15	68	38.7	828	br. oz	Do.
2534	July 15	40 01 00	67 29 15	70	37.8	1,234	gy. oz	Do.
2535	July 15	40 03 30	67 27 15	70	37.8	1,149	gy. oz	Do.
2536	Aug. 7	39 56 15	70 47 30	74		157	gn. m. fne. s	Do.
2537	Aug. 7	39 56 45	70 50 30	74	46.2	156	gn. m. fne. s	Do.
2538	Aug. 7	39 57 30	70 51 15	74	46.2	150	gn. m. fne. s	Do.
2539	Aug. 7	39 59 45	70 53 00	74	47.7	133	gn. s	Do.
2540	Aug. 7	39 58 20	70 52 00	74	46.7	144	gn. s	Do.
2541	Aug. 7	39 57 45	70 50 30	73	47.7	134	gn. s. brk. sh	Do.
2542	Aug. 7	40 00 15	70 42 20	76	47.2	129	s. brk. sh	Do.
2543	Aug. 7	39 58 15	70 42 30	76	45.2	166	gn. s. bk. sp	Do.
2544	Aug. 8	40 01 45	70 24 00	74	47.7	131	gn. s. bk. sp	Do.
2545	Aug. 8	40 01 00	70 23 45	74	46.7	142	gn. s. bk. sp	Do.
2546	Aug. 8	39 53 30	70 17 30	72	39.6	538	gn. m	Do.
2547	Aug. 8	39 54 30	70 20 00	76	39.6	390	gn. m	Do.
2548	Aug. 8	39 56 00	70 14 30	76	43.4	200	gn. s. bk. sp	Do.
2549	Aug. 8	39 51 30	70 17 00	76	39.5	571	gn. m	Do.
2550	Aug. 9	39 44 30	70 30 45	76	38.5	1,081	br. m	Do.
2551	Aug. 9	39 46 00	70 36 30	77	38.7	778	gy. oz	
2552	Aug. 9	39 47 07	70 35 00	77	39.6	721	gy. oz	Do.
2553	Aug. 9	39 48 00	70 36 00	77	39.2	551	gn. m	Do.
2554	Aug. 9	39 48 30	70 40 30	77	39.6	445	gn. m	Do.
2555	Aug. 10	39 53 00	71 32 00	75	47.7	136	gn. m. s	Do.
2556	Aug. 10	39 52 15	71 32 00	75		180	gn. m. fne. s	S. B. T.
2557	Aug. 10	39 53 10	71 31 00	75	46.7	154	gn. m	Do.
2558	Aug. 10	39 47 15	71 50 30	76	50.3	123	gn. s	Do.
2559	Aug. 10	39 48 00	71 48 30	76		120	br. m. s	Do.
2560	Aug. 10	39 48 10	71 48 40	76	50.7	114	br. m. s	L. B. T.
2561	Aug. 10	39 38 00	71 42 00	77	39.2	500	gn. m	Do.
2562	Aug. 11	39 15 30	71 25 00	76	37.3	1,434	gy. oz	Do.
2563	Aug. 11	39 18 30	71 23 30	77	37.4	1,422	gy. oz	Do.
2564	Aug. 11	39 22 00	71 23 30	78	37.3	1,390	gy. oz	Do.
2565	Aug. 28	38 19 20	60 02 30	77	36.2	2,069	gy. and br. oz	Do.
2566	Aug. 29	37 23 00	68 08 00	80	36.4	2,620	gy. oz	Do.
2567	Aug. 30	37 45 00	66 56 00	78	36.4	2,721	gy. oz	(*b*)
2568	Aug. 31	39 15 00	68 08 00	75	36.9	1,781	gy. oz	Do.
2569	Aug. 31	39 26 00	68 03 30	75	37	1,782	gy. oz	Do.
2570	Sept. 1	39 54 00	67 05 30	72	36.8	1,813	glob. oz	Do.
2571	Sept. 1	40 09 30	67 09 00	72	37.8	1,356	gy. glob. oz	Do.
2572	Sept. 2	40 29 00	66 04 00	72	37.8	1,769	gy. oz	Do.
2573	Sept. 2	40 34 18	66 09 00	71	37.3	1,742	gy. m. s	S. B. T.
2574	Sept. 3	41 02 30	65 08 15	71	36.7	1,791	yl. glob. oz	(*c*)
2575	Sept. 3	41 07 00	65 26 30	71	37.1	1,710	gy. oz	Do.
2576	Sept. 4	41 15 30	68 15 00	61		18	crs. wh. s. yl. sp	Do.
2577	Sept. 4	41 17 00	68 21 00	61		32	yl. s. p. hrd	Do.
2578	Sept. 4	41 20 30	68 34 30	60	54.4	37	fne. wh. s. bk. sp	Do.
2579	Sept. 4	41 23 00	68 47 00	61	42.2	70	fne. dk. gy. s	Do.
2580	Sept. 4	41 25 30	69 01 00	62	42.4	83	yl. s. bk. sp	Do.

a Dories lowered with trawl grapnels to drag for coral. Several sprays obtained.
b Lost trawl. *c* Dredge-rope parted, losing large beam-trawl and 321 fathoms of wire rope.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Cape Sable to Cape May.						
	1885.	° ′ ″	° ′ ″	°*F.*	°*F.*	*Fms.*		
2581	Sept. 18	39 43 00	71 34 00	70	.....	394	gn. m	L. B. T.
2582	Sept. 18	39 50 00	71 43 00	70	47.2	137	gn. m	Do.
2583	Sept. 18	39 50 45	71 43 00	70	.....	131	gn. m. s	Do.
2584	Sept. 19	39 05 30	72 23 20	72	39.5	541	gy. m	Do.
2585	Sept. 19	39 08 30	72 17 00	73	39	542	dk. gy. m	(*a*)
2586	Sept. 20	39 02 40	72 40 00	71	40.2	328	dk. gy. m	S. B. T.
2587	Sept. 20	39 02 00	72 38 00	71	39.7	404	dk. gy. m	Do.
2588	Sept. 20	39 02 00	72 36 00	71	39.5	479	gn. m	Do.
2589	Sept. 21	38 55 00	72 50 30	70	44.2	231	gn. m. s	Do.
2590	Sept. 21	38 53 30	72 52 00	71	47.6	190	gn. m. s	Do.
2591	Sept. 21	38 53 30	72 52 00	71	.....	188	gn. m. s	Do.
		Cape Hatteras to Charleston, S. C.						
2592	Oct. 17	35 02 20	75 12 00	79	.....	120	fne. gy. s	L. B. T.
2593	Oct. 17	35 01 19	75 12 00	79	.....	143	gy. s. bk. sp	Do.
2594	Oct. 17	35 01 00	75 12 00	78	.....	160	crs. gy. s. brk. sh	Do.
2595	Oct. 17	35 08 00	75 05 30	78	.....	63	gy. s. brk. sh	Do.
2596	Oct. 17	35 08 30	75 10 00	78	.....	49	gy. s	Do.
2597	Oct 18	34 57 00	75 43 30	76	.....	15	crs. gy. s	Do.
2598	Oct. 18	34 51 00	75 40 15	77	.....	22	wh. s. brk. sh	Do.
2599	Oct. 18	34 45 20	75 38 10	77	.....	25	wh. s. brk. sh	Do.
2600	Oct. 18	34 39 30	75 35 30	78	.....	87	fne. gy. s. bk. sp. brk. sh.	Do.
2601	Oct. 18	34 39 15	75 33 30	78	.....	107	gy. s. p	Do.
2602	Oct. 18	34 38 30	75 33 30	78	.....	124	s. r	Do.
2603	Oct. 18	34 38 30	75 33 30	77	.....	124	s. r	Do.
2604	Oct. 18	34 37 30	75 39 45	78	.....	34	yl. s. brk. sh	Do.
2605	Oct. 18	34 35 30	75 45 30	78	.....	32	wh. s. bk. sp	Do.
2606	Oct. 18	34 35 15	75 52 00	78	.....	25	wh. s bk. sp	Do.
2607	Oct. 19	34 38 00	76 12 00	76	.....	18	fne. gy. s	Do.
2608	Oct. 19	34 32 00	76 12 00	76	.....	22	crs. gy. s. bk. sp	Do.
2609	Oct. 19	34 26 00	76 12 00	78	.....	22	fne. gy. s	Do.
2610	Oct. 19	34 20 00	76 12 00	75	.....	22	wh. s. bk. sp. brk. sh.	Do.
2611	Oct. 19	34 15 00	76 11 30	75	.....	31	bk. s. brk. sh	Do.
2612	Oct. 19	34 11 00	76 10 30	78	.....	52	crs. wh. s. brk. sh	Do.
2613	Oct. 19	34 09 00	76 02 00	78	.....	168	gy. s. bk. sp	Do.
2614	Oct. 19	34 09 00	76 02 00	78	.....	168	gy. s. bk. sp	Do.
2615	Oct. 20	33 45 00	77 25 00	75	.....	18	gy. s	Dredge.
2616	Oct. 20	33 42 45	77 31 00	75	.....	17	s. p	Do.
2617	Oct. 20	33 37 30	77 36 30	75	.....	14	crs. yl. s. brk. sh	Do.
2618	Oct. 20	33 37 15	77 35 30	74	.....	17	crs. yl. s. brk. sh	S. B. T.
2619	Oct. 20	33 38 00	77 36 00	74	.....	15	crs. yl. s. brk. sp. rot. co.	Dredge.
2620	Oct. 20	33 37 45	77 36 30	75	.....	15	gy. s. rot. co	S. B. T.
2621	Oct. 20	33 34 00	77 42 00	75	.....	9	gy. s. brk. co	Do.
2622	Oct. 20	33 38 00	77 36 00	74	.....	15	gy. s. brk. co	Do.
2623	Oct. 20	33 38 00	77 36 00	74	.....	15	gy. s. brk. co	Do.
2624	Oct. 21	32 36 00	77 29 15	78	.....	258	gy. s. bk. sp	L. B. T.
2625	Oct. 21	32 35 00	77 30 00	76	.....	247	gy. s. bk. sp	Do.
2626	Oct. 21	32 27 30	77 20 30	76	.....	353	fne. gy. s	Do.
2627	Oct. 21	32 21 30	77 07 00	77	.....	437	yl. m	Do.
2628	Oct. 21	32 24 00	76 55 30	77	.....	528	yl. m	Do.
		Bahamas, Florida, and Cuba.						
	1886.							
2629	Mar. 8	23 48 40	75 10 40	73	38.4	1,169	co. s	L. B. T.
2630	Mar. 12	24 39 45	76 11 30	72	61.8	244	co. s	Tgls.
2631	Mar. 12	24 39 30	76 11 00	72	59.8	280	co. s	Do.
2632	Mar. 13	24 30 43	76 23 45	73	39.4	791	co. s. gy. oz	L. B. T.
2633	Apr. 7	23 11 00	82 19 30	76	60.8	208	co. s	Tgls.
2634	Apr. 7	23 10 45	82 18 45	76	.....	162	br. s. brk. sh	Do.
2635	Apr. 7	23 10 55	82 18 55	73	62.8	208	dead co. sh	Do.
2636	Apr. 7	23 10 45	82 18 45	73	62.6	191	dead co. sh	Do.
2637	Apr 7	23 10 45	82 19 00	75	65.8	143	dead co. sh	Do.
2638	Apr. 7	23 17 45	82 18 00	76	39.6	1,025	yl. s	L. B. T.
2639	Apr. 9	25 04 50	80 15 10	73	.....	56	co. s	Bl. Dr.
2640	Apr. 9	25 05 00	80 15 00	73	.....	56	co. s	L. B. T.
2641	Apr. 9	25 11 30	80 10 00	74	69.2	60	co. s	Do.
2642	Apr. 9	25 20 30	79 58 00	74	42.6	217	gy. s	Do.
2643	Apr. 9	25 25 00	79 55 15	74	43.1	211	gy. s	Do.
2644	Apr. 9	25 40 00	80 00 00	73	43.4	193	gy. s	Bl. Dr.
2645	Apr. 9	25 46 30	80 02 00	75	43.4	157	gn. s	Do.

a Lost trawl.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position.		Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Lat. N.	Long. W.					
		Bahamas, Florida, and Cuba.						
	1886.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
2646	Apr. 9	25 47 00	80 05 00	75	-------	85	gy. s. for	Bl. Dr.
2647	Apr. 9	25 48 00	80 04 00	75	-------	85	gy. s. for	Do.
2648	Apr. 9	25 53 00	80 03 30	73	-------	84	gn. m	Do.
2649	Apr. 12	23 34 00	76 33 00	74	74.2	36	co. s	Tgls.
2650	Apr. 12	23 34 30	76 34 00	74	57.8	369	co. s. wh. oz	Do.
2651	Apr. 13	24 02 00	77 12 45	74	73.4	97	wh. oz	Do.
2652	Apr. 13	24 12 30	77 13 00	74	67.1	140	wh. m	Bl. Dr.
2653	Apr. 14	24 52 30	77 39 00	74	39.1	1,000	lt. br. oz	L. B. T.
2654	May 2	27 57 30	77 27 30	73	39.3	660	yl. oz. bk. sp	Do.
2655	May 2	27 22 00	78 07 30	76	47.5	338	gy. s	Do.
		Bahamas to Cape Fear, N. C.						
2656	May 3	27 58 30	78 24 00	71	41.2	572	for	L. B. T.
2657	May 3	28 08 00	78 28 00	73	44.7	540	for	Do.
2658	May 3	28 21 00	78 33 00	73	44.7	514	for. brk. sh	Do.
2659	May 3	28 32 00	78 42 00	74	45.2	509	br. for	Do.
2660	May 3	28 40 00	78 46 00	74	45.7	504	yl. for	Do.
2661	May 4	29 16 30	79 36 30	75	45.5	438	gy. s. bk. sp	Do.
2662	May 4	29 24 30	79 43 00	75	43.7	434	gy. s. brk. sh	Do.
2663	May 4	29 39 00	79 49 00	77	42.7	421	br. s	Do.
2664	May 4	29 41 00	79 55 00	75	42.7	373	co. s	Do.
2665	May 4	29 47 00	80 05 45	76	45.2	263	fne. gy. s	Do.
2666	May 5	30 47 30	79 49 00	74	48.3	270	gy. s	Do.
2667	May 5	30 53 00	79 42 30	75	48.7	273	gy. s. bk. sp	Do.
2668	May 5	30 58 30	79 38 30	76	46.3	294	gy. s. dd. co	Do.
2669	May 5	31 09 00	79 33 30	77	43.7	352	gy. s. dd. co	Do.
2670	May 5	31 20 00	79 22 00	74	44.5	280	gy. s. dd. co	Do.
2671	May 5	31 20 00	79 22 00	77	-------	280	gy. s. dd. co. s	Tgls.
2672	May 5	31 51 00	79 05 00	77	54.3	277	crs. br. s	Do.
2673	May 6	32 26 00	77 43 30	77	51.6	240	co. gy. s. bk. sp	L. B. T.
2674	May 6	32 32 00	77 17 00	76	46	316	gy. s. bk. sp. sh	Do.
2675	May 6	32 32 30	77 15 00	75	45.8	327	gy. s. bk. sp. sh	Do.
2676	May 6	32 39 00	77 01 00	77	45.8	407	gn. oz. gy. s	Do.
2677	May 6	32 39 00	76 50 30	78	39.3	478	gn. m	Do.
2678	May 6	32 40 00	76 40 30	77	38.7	731	lt. gy. oz	Do.
2679	May 6	32 40 00	76 40 30	75	38.6	782	lt. gy. oz	Do.
		Long Island to Nantucket.						
2680	July 16	39 50 00	70 26 00	----	-------	555	No specimen	L. B. T.
2681	July 16	39 43 00	70 29 00	----	-------	990	gn. m	Do.
2682	July 16	39 38 00	70 22 00	----	-------	1,004	gn. m. s	Do.
2683	July 17	39 33 00	70 50 00	----	-------	887	br. oz	Do.
2684	July 17	39 35 00	70 54 00	----	-------	1,106	br. c. bk. sp	Do.
2685	July 17	39 35 00	71 02 30	----	-------	1,137	gn. m. wh. sp	Do.
2686	July 18	39 52 00	71 20 45	----	-------	226	gn. m	Do.
2687	July 18	39 46 00	71 19 00	----	-------	326	gn. m	Do.
2688	July 18	39 42 00	71 12 00	----	-------	644	gn. m	Do.
2689	July 18	39 42 00	71 15 30	----	-------	525	gn. m	Do.
2690	July 18	39 39 00	71 11 00	----	-------	643	gn. m	Do.
2691	July 18	39 37 00	71 08 00	----	-------	835	lt. gn. m	Do.
		Off Newfoundland.						
2692	Aug. 11	46 50 00	44 35 00	----	-------	73	gy. s. sml. bk. st	L. B. T.
2693	Aug. 11	46 53 00	44 39 30	----	-------	78	rd. and gn. s. bk. and gy. p.	Do.
2694	Aug. 11	46 52 30	44 54 30	----	-------	86	gy. s. bk. sp	Do.
2695	Aug 11	46 51 30	45 06 30	----	-------	105	gy. s. bk. sp. p	Do.
2696	Aug. 11	46 53 30	45 05 30	----	-------	98	gy. s. bk. sp	Do.
2697	Aug. 12	47 40 00	47 35 30	----	-------	206	gn. m. bk. sp	Do.
2698	Aug. 22	45 07 00	55 09 00	----	-------	90	gy. s. bk. sp. p	Do.
2699	Aug. 22	45 04 00	55 23 00	----	-------	72	co	Do.
2700	Aug. 22	44 56 30	55 48 00	----	-------	59	gy. s. bk. sp	Do.
2701	Aug. 22	44 56 00	55 49 30	----	-------	75	gy. s. bk. sp	Do.
2702	Aug. 22	44 50 00	56 19 30	----	-------	215	gn. m	Do.
		Cape Breton to Nantucket.						
2703	Aug. 23	44 01 00	59 02 30	----	-------	140	gy. s. bk. sp	L. B. T.
2704	Aug. 23	43 32 00	59 22 00	----	-------	110	gy. s. bk. sp	Do.
2705	Aug 24	42 47 00	61 04 00	----	-------	1,255	lt. br. oz	Do.
2706	Aug. 27	41 28 30	65 35 30	----	-------	1,188	gy. oz. for	Do.
2707	Aug. 27	41 24 00	65 48 00	...	-------	1,099	br. oz. for	Do.
2708	Aug. 28	40 07 00	67 49 00	----	-------	980	br. oz	Do.
2709	Aug. 28	40 07 00	67 54 00	----	-------	866	br. m	Do.
2710	Aug. 28	40 06 00	68 01 30	----	-------	984	gn. m	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Nantucket to Cape Charles.						
	1886.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
2711	Sept. 16	38 59 00	70 07 00	----	----	1,544	glob. oz	L. B. T.
2712	Sept. 17	38 20 00	70 05 30	----	----	1,867	br. oz	Do.
2713	Sept. 17	38 20 00	70 08 30	----	----	1,859	br. oz	Do.
2714	Sept. 17	38 22 00	70 17 30	----	----	1,825	br. oz	Do.
2715	Sept. 18	38 29 30	70 54 30	----	----	1,753	br. oz	Do.
2716	Sept. 18	38 29 30	70 57 00	----	----	1,631	br. oz. for	Do.
2717	Sept. 18	38 24 00	71 13 00	----	----	1,615	br. oz	Do.
2718	Sept. 19	38 24 00	71 52 00	----	----	1,569	br. oz	Do.
2719	Sept. 19	38 29 00	71 58 00	----	----	1,536	gy. oz	Do.
2720	Sept. 19	38 36 30	72 12 00	----	----	1,509	gy. oz	Do.
2721	Sept. 20	38 56 00	72 11 30	----	----	813	gy. oz	Do.
2722	Sept. 20	39 13 00	72 01 00	----	----	594	gn. m	Do.
2723	Oct. 23	36 47 00	73 09 30	----	----	1,685	gy. oz. for	Do.
2724	Oct. 23	36 47 00	73 25 00	----	----	1,641	gy. oz. for	Do.
2725	Oct. 24	36 34 00	73 48 00	----	----	1,374	gy. oz. for	Do.
2726	Oct. 24	36 34 00	73 54 30	----	----	1,253	gy. oz	Do.
2727	Oct. 24	36 35 00	74 03 30	----	----	1,239	gy. oz	Do.
2728	Oct. 25	36 30 00	74 33 00	----	----	859	gy. oz	Do.
2729	Oct. 25	36 36 00	74 32 00	----	----	679	dk. gn. m	Do.
2730	Oct. 25	36 42 00	74 30 00	----	----	727	gn. m. for	Do.
2731	Oct. 25	36 45 00	74 28 00	----	----	781	gy. oz	Do.
2732	Oct. 26	37 27 00	73 33 00	----	----	1,152	dk. gn. m	Do.
2733	Oct. 26	37 26 00	73 43 00	----	----	944	gn. m	Do.
2734	Oct. 26	37 23 00	73 53 00	----	----	841	sft. gn. m	Do.
2735	Oct. 26	37 23 00	74 02 00	----	----	811	sft. gn. m	Do.
	1887.							
2736	Apr. 8	Hampton Roads		46	46	11	s	S. B. T.
2737	Apr. 8	----do		46	47	12	s	Do.
		Cape Charles to Long Island.						
2738	Sept. 16	36 52 00	74 23 00	70	38	958	gn. m	L. B. T.
2739	Sept. 17	37 34 30	73 58 00	69	38.2	811	gy. m	Do.
2740	Sept. 17	37 40 00	73 50 00	70	38	1,011	br oz	Do.
2741	Sept. 17	37 44 00	73 57 00	70	38	852	gn. m	Do.
2742	Sept. 17	37 46 30	73 56 30	69	38	865	gn. m	Do.
2743	Sept. 18	38 31 00	72 53 00	67	37.8	1,155	gn. oz	Do.
2744	Sept. 18	38 35 00	73 05 15	69	39	554	bu. m	Do.
2745	Sept. 18	38 42 00	73 05 30	68	41.8	224	gn. m	Do.
2746	Sept. 18	38 46 00	73 05 45	68	51.2	102	gr. s	Do.
2747	Sept. 19	39 27 00	71 15 00	67	37.5	1,276	bu. m	Do.
2748	Sept. 19	39 31 00	71 14 30	68	37.8	1,163	gy. m. for	Do.
2749	Sept. 19	39 42 00	71 17 00	67	38.8	705	gn. oz	Do.
		Lesser Antilles.						
2750	Nov. 27	18 30 00	63 31 00	80	44.5	496	fne. gy. s	2 S. D.
2751	Nov. 28	16 54 00	63 12 00	81	40	687	bu. glob. oz	L. B. T.
2752	Dec. 4	13 34 00	61 04 00	82	48	281	bk. s	Do.
2753	Dec. 4	13 34 00	61 03 00	83	48	281	bk. s	T.
2754	Dec. 5	11 40 00	58 33 00	84	38	880	glob. oz	L. B. T.
		East coast South America.						
2755	Dec. 7	8 04 00 Lat. S.	52 47 00	81	40	720	bu. m	L. B. T.
2756	Dec. 14	3 22 00	37 49 00	79	40.5	417	gy. spk. sp	S. B. T.
2757	Dec. 16	6 59 00	34 47 00	79	79	20	brk. sh	S. D.
2758	Dec. 16	6 59 30	34 47 00	79	79	20	brk. sh	Do.
2759	Dec. 16	7 00 00	34 47 00	79	79	20	brk. sh	S. B. T.
2760	Dec. 18	12 07 00	37 17 00	80	39.5	1,019	br. co	L. B. T.
2761	Dec. 26	15 32 00	38 32 54	79	39	818	pter. oz	Do.
2762	Dec. 30	23 08 00	41 34 00	70	57.1	59	bu. m	S. D.
2763	Dec. 30	24 17 00	42 48 30	75	37.9	671	br. glob. oz	L. B. T.
	1888.							
2764	Jan. 12	36 42 00	56 23 00	68	----	11.5	s. brk. sh	L. B. T.
2765	Jan. 12	36 43 00	56 23 00	69	----	10.5	s. brk. sh	Do.
2766	Jan. 12	36 47 00	56 23 00	68	----	10.5	s. brk. sh	Do.
2767	Jan. 13	40 03 00	58 56 00	64	----	52	fne. dk. s	Do.
2768	Jan. 14	42 24 00	61 38 30	61	----	43	dk. s. bk. sp	Do.
2769	Jan. 15	45 22 00	64 20 00	58	56.6	51.5	gn. m. fne. s	Do.
2770	Jan. 16	48 37 00	65 46 00	52	----	58	gy. s. bk. sp	Do.
2771	Jan. 17	51 34 00	68 00 00	50	49.4	50.5	gy. s. bk. sp	Do.
2772	Jan. 17	52 16 00	68 13 00	52	----	31.5	fne. gy. s	Do.
2773	Jan. 17	52 23 00	68 11 00	51	----	10	fne. gy. s	S. B. T.
		Straits of Magellan.						
2774	Jan. 18	52 23 00	68 31 30	49	----	17	s. g	S. B. T.
2775	Jan. 18	52 22 30	69 22 00	51	----	29.5	s. st	Do.
2776	Jan. 18	52 41 00	69 55 30	51	----	21	s. g	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position.		Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Lat. S.	Long. W.					
		Straits of Magellan.						
	1888.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
2777	Jan. 19	52 38 00	70 10 30	51	.....	19.75	g	S. B. T.
2778	Jan. 23	53 01 00	70 42 15	49	47.9	61	gy. s. bk. sp	L. B. T.
2779	Jan. 23	53 06 00	70 40 30	49	46.9	77.5	gn. oz	Do.
		Off Chile, South America.						
2780	Feb. 2	53 01 00	73 42 30	51	46.9	369	gn. m	L. B. T.
2781	Feb. 4	51 52 00	73 41 00	51	49.9	348	bu. m	Do.
2782	Feb. 6	51 12 00	74 13 30	49	47.9	258	bu. m	S. B. T.
2783	Feb. 6	51 02 30	74 08 30	49	47.9	122	bu. m	Do.
2784	Feb. 8	48 41 00	74 24 00	55	51.9	194	bu. m	L. B. T.
2785	Feb. 8	48 09 00	74 36 00	57	46.9	449	bu. m	Do.
2786	Feb. 9	46 46 00	75 16 30	57	54.9	57	gn. m	Do.
2787	Feb. 9	46 47 30	75 15 00	57	53.9	61	gn. m	Do.
2788	Feb. 11	45 35 00	75 55 00	58	36.9	1,050	gn. m	Do.
2789	Feb. 12	42 36 00	75 28 00	60	35.9	1,342	bu. m	Do.
2790	Feb. 13	39 21 00	74 42 00	62	35.9	1,287	gn. m	Do.
2791	Feb. 14	38 08 00	75 53 00	61	37.9	677	yl. m	Do.
		Ecuador to Panama.						
2792	Mar. 2	00 37 00	81 00 00	77	42.9	401	gn. m	L. B. T.
		Lat. N.						
2793	Mar. 3	01 03 00	80 15 00	78	38.4	741	gn. m	Do.
2794	Mar. 5	07 37 00	78 46 30	78	59.6	62	gy. s. bk. sp. brk. sh	S. B. T.
2795	Mar. 5	07 57 00	78 55 00	78	64.1	33	gy. s. bk. sp. brk. sh	L. B. T.
2796	Mar. 5	08 05 00	78 51 00	78	.....	33	gy. s. brk. sh	Oyster.
2797	Mar. 5	08 06 30	78 51 00	78	.....	33	gy. s. brk. sh	L. B. T.
2798	Mar. 5	08 10 30	78 50 30	78	.....	18	gy. s. brk. sh	Do.
2799	Mar. 6	08 44 00	79 09 00	75	.....	29.5	gn. m	Do.
2800	Mar. 30	08 51 00	79 31 30	77	.....	7	gn. m	Do.
2801	Mar. 30	08 47 00	79 29 30	78	.....	14	gn. m	Do.
2802	Mar. 30	08 38 00	79 31 30	78	.....	16	gn. m	Do.
2803	Mar. 30	08 27 00	79 35 00	78	.....	26	gn. m	Do.
2804	Mar. 30	08 16 30	79 37 45	81	.....	47	gn. m	Do.
2805	Mar. 30	07 56 00	79 41 30	78	.....	51.5	gn. m	Do.
		Galapagos Islands.						
2806	Apr. 3	00 30 00	88 37 30	80	36.4	1,379	br. glob. oz	L. B. T.
		Lat. S.	Long. W.					
2807	Apr. 4	00 24 00	89 06 00	79	38.5	812	glob. oz. co. m	Do.
2808	Apr. 4	00 36 30	89 19 00	79	39.9	634	co. s	Do.
2809	Apr. 4	00 50 00	89 36 00	79	74.1	45	gy. s	S. B. T.
2810	Apr. 7	01 22 00	89 39 30	81	.....	6.5	co. s	Tangles.
2811	Apr. 7	01 21 30	89 39 30	81	.....	19	co. s	S. B. T.
2812	Apr. 7	01 21 30	89 39 45	81	.....	20	co. s	Tangles.
2813	Apr. 7	01 21 00	89 40 15	81	.....	40	co. s	S. Dredge.
2814	Apr. 9	01 17 30	90 30 00	79	.....	20	hrd	Do.
2815	Apr. 9	01 17 30	90 30 15	79	.....	33.5	gy. s. bk. sp	Tangles.
2816	Apr. 9	01 17 00	90 31 30	79	.....	78.5	gy. s. fne. g	Do.
2817	Apr. 15	00 46 00	89 42 00	80	46.9	271	wh. s	S. B. T.
2818	Apr 15	00 29 00	89 54 30	83	43.9	392	wh. and bk s	L. B. T.
2819	Apr. 15	00 08 00	90 06 00	83	39.9	671	wh. s	Do.
		Off Manzanillo, Mexico.						
		Lat. N.	Long. W.					
2820	Apr. 26	18 43 00	104 04 00	85	45.9	294	br. m	L. B. T.
2821	Apr. 26	18 52 00	10 10 30	84	53.9	117	br. m	Do.
		Gulf of California.						
2822	Apr. 30	24 16 00	110 22 00	73	.....	21	gy. s. brk. sh	S. B. T.
2823	Apr. 30	24 18 00	110 22 00	73	.....	26.5	brk. sh	L. B. T.
2824	Apr. 30	24 22 30	110 19 30	73	.....	8	brk. sh	Tangles.
2825	Apr. 30	24 22 15	110 19 15	73	.....	7	brk. co	Ship dredge.
2826	Apr. 30	24 12 00	109 55 00	74	.....	9.5	sh	Oyster dredge.
2827	Apr. 30	24 11 45	109 55 00	74	.....	10	sh	Do.
2828	Apr. 30	24 11 30	109 55 00	74	.....	10	sh	Do.
		Off Lower California.						
2829	May 1	22 52 00	109 55 00	75	74.1	31	rky	Tangles.
2830	May 1	23 33 00	110 37 00	67	74.1	66	fne. s	L. B. T.
2831	May 2	24 32 00	111 59 00	67	.....	12	fne. gy. s	Do.
2832	May 2	24 38 00	112 17 30	60	56.4	51	gn. m	Do.
2833	May 2	24 38 00	112 17 30	60	.....	51	gn. m	Tangles.
2834	May 3	26 14 00	113 13 00	61	53.9	48	yl. m	L. B. T.
2835	May 4	26 42 30	113 34 15	56	.....	5.5	gn. m	Ship dredge.
2836	May 4	26 42 30	113 34 15	57	.....	6	gn. m	Oyster dredge.
2837	May 5	28 10 00	115 09 45	62	.....	23	fne. s	Ship dredge.
2838	May 5	28 12 00	115 09 00	62	.....	44	gn. m	L. B. T.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Santa Barbara Islands, California.						
	1888.	° ′ ″	° ′ ″	°F.	° F.	Fms.		
2839	May 8	33 08 00	118 40 00	61	41.4	414	gy. s	L. B. T.
2840	May 9	34 11 00	120 15 00	54	43.9	27.6	gn. m	Do.
		Unalaska to Cook Inlet.						
2841	July 23	54 18 00	165 55 00	46	41	56	p	S. B. T.
2842	July 23	54 15 00	166 03 00	46	41	72	p	Do.
2843	July 28	53 56 00	165 56 00	50	43.5	45	brk. sh. and p	Do.
2844	July 28	53 56 00	165 40 00	48	42	54	gy. s	L. B. T.
2845	July 29	54 05 00	164 09 00	51	42	42	crs. bk. s	Do.
2846	July 30	54 08 00	162 44 00	50	42	44	g	Do.
2847	July 31	55 01 00	160 12 00	51	42	48	fne. gy. s	Do.
2848	July 31	55 10 00	160 18 00	49	41	110	gn. m	Do.
2849	Aug. 2	55 16 00	160 28 00	51	43	69	gn. m	Do.
2850	Aug. 4	54 52 00	159 46 00	51	48.2	21	brk. sh	Do.
2851	Aug. 4	54 55 00	159 52 00	51	44.8	35	gy. s. brk. sh	Do.
2852	Aug. 4	55 15 00	159 37 00	48	41.8	58	bk. s	Do.
2853	Aug. 9	56 00 00	154 20 00	55	41	159	gy. s	Do.
2854	Aug. 10	56 55 00	153 04 00	55	42.8	60	bk. s	Do.
2855	Aug. 10	57 00 00	153 18 00	56	44	69	gn. m	Do.
2856	Aug. 22	58 07 00	151 36 00	54	44	68	gy. sh. bk. sp	Do.
2857	Aug. 22	58 05 00	150 46 00	57	44.6	51	brk. sh. gy. s	Do.
2858	Aug. 24	58 17 00	148 36 00	59	39.8	230	bu. m. g	Do.
		Sitka to Columbia River.						
2859	Aug. 29	55 20 00	136 20 00	60	34.9	1,569	gy. oz	L. B. T.
2860	Aug. 31	51 23 00	130 34 00	58	36 5	876	gn. m	Do.
2861	Aug. 31	51 14 00	129 50 00	60	42.6	204	No specimen in cup.	Do.
2862	Sept. 1	50 49 00	127 36 30	58	44.7	238	gy. s. and p	Do.
2863	Sept. 5	48 58 00	123 10 00	62	48.5	67	fne. s. brk. sp	Do.
2864	Sept. 6	48 22 00	122 51 00	52	47.7	48	m. brk. sh. s	Do.
2865	Sept. 6	48 12 00	122 49 00	52	51.7	40	p	Do.
2866	Sept. 20	48 09 00	125 03 00	59	43.2	171	gy. s	Do.
2867	Sept. 20	48 07 00	124 55 00	58		37	fne. gy. s	Do.
2868	Sept. 21	47 52 00	124 44 00	58	46.9	31	gy. s	Do.
2869	Sept. 21	47 38 00	124 39 00	60	48.4	32	bk. s	Do.
2870	Sept. 23	46 44 00	124 32 00	58	46.5	58	rky	Do.
2871	Sept. 23	46 55 00	125 11 00	62	38.4	559	br. oz	Do.
2872	Sept. 24	48 17 00	124 52 00	59	45.5	38	gy. s	Do.
2873	Sept. 24	48 30 00	124 57 00	54	47.8	40	r	Do.
2874	Sept. 24	48 30 00	124 57 00	52	50.3	27	r. and sh	Tangles.
2875	Sept. 24	48 30 00	124 57 00	52	47.8	40	r. and sh	Do.
2876	Sept. 25	48 33 00	124 53 00	49	45.5	59	bk. s. and m	L. B. T.
2877	Sept. 25	48 33 00	124 53 00	49	45.5	59	bk. s. and m	Tangles.
2878	Sept. 25	48 37 00	125 32 00	57	45.5	66	p	S. D.
2879	Sept. 26	48 53 00	125 53 00	54	50.3	34	r	Do.
2880	Sept. 26	48 53 00	125 53 00	54	50.3	34	r	S. D.
2881	Sept. 26	49 00 00	125 48 00	57	52.3	24	gy. s	Do.
		Off Oregon.						
2882	Oct. 13	46 09 00	124 22 30	60	45.8	68	gy. s	L. B. T.
2883	Oct. 18	45 56 00	124 01 30	60	50.1	29	fne. gy. s	S. D.
2884	Oct. 18	45 55 00	124 02 00	60	50.2	29	fne. gy. s	Do.
2885	Oct. 18	45 56 00	124 02 00	60	49	30	fne. gy. s	Do.
2886	Oct. 19	43 59 00	124 56 30	57	48.1	50	rky	Do.
2887	Oct. 19	43 58 00	124 57 00	59	47.1	42	c. and p	L. B. T.
2888	Oct. 19	43 58 00	124 57 30	59	47.6	41	c. and p	Do.
2889	Oct. 19	43 59 00	124 56 00	57	47.7	46	c. sh	Do.
2890	Oct. 19	43 46 00	124 57 00	59	42.2	277	gy. s	Do.
	1889.	*Off Southern California.*						
2891	Jan. 5	34 25 00	120 42 00	57	45.1	233	m	L. B. T.
2892	Jan. 5	34 15 00	120 36 00	57	44.1	284	yl. m	Do.
2893	Jan. 5	34 12 30	120 32 30	59	48.6	145	fne. gy. s. m	Do.
2894	Jan. 5	34 07 00	120 33 30	60	55.6	53	brk. sh. s	S. D.
2895	Jan. 5	34 07 00	120 33 30	60		53	brk. sh. s	Tangles.
2896	Jan. 6	33 55 30	120 28 00	59	42.8	376	yl. m	L. B. T.
2897	Jan. 6	33 59 30	120 29 30	61	47.1	197	rky	Tangles.
2898	Jan. 6	33 00 30	120 29 00	61		158		L. B. T.
2899	Jan. 6	34 00 00	120 23 00	59		44	gy. s. brk. sh	Do.
2900	Jan. 7	34 01 30	120 01 30	58		13	s	S. D.
2901	Jan. 7	34 05 00	120 02 00	58	55.1	48	gy. s. m	
2902	Jan. 7	34 06 00	120 02 00	59	45.0	53	fne. gy. s. m	S. B. T.
2903	Jan. 7	34 11 30	120 03 00	59	43.5	322	g. m	L. B. T.
2904	Jan. 7	34 18 30	120 04 30	59	43.7	314	g. m	Do.
2905	Jan. 8	34 23 00	120 20 00	59		95	rky	S. B. T.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position.		Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Lat. N.	Long. W.					
		Off Southern California.						
	1889.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
2906	Jan. 8	34 23 30	120 19 30	58	55.5	96	s. m	Tangles.
2907	Jan. 8	34 24 30	120 20 00	58		44	fne. gy. s	L. B. T.
2908	Jan. 8	34 25 25	120 20 00	58		31	gy. s. brk. sh	Do.
2909	Jan. 8	34 22 00	120 08 30	59	45.2	205	gn. m	S. B. T.
2910	Jan. 8	34 20 00	119 54 00	61	45.2	229	gn. m	Do.
2911	Jan. 16	32 27 30	119 05 00	59		60	r. s	S. D.
2912	Jan. 16	32 25 15	119 04 30	59		10	rky	Tangles.
2913	Jan. 16	32 25 30	119 03 30	60	59	26	brk. sh	S. D.
2914	Jan. 16	32 25 00	119 03 15	60	59	26	brk. sh	Tangles.
2915	Jan. 16	32 23 30	119 02 15	60	53.1	55	gy. s	Do.
2916	Jan. 16	32 22 30	119 02 00	60	49.1	93	rky	L. B. T.
2917	Jan. 16	32 22 30	119 03 30	59	49.1	90	fne. g. s. brk. sh	S. D.
2918	Jan. 16	32 22 30	119 03 30	59	52.4	67	fne. gy. s	Do.
2919	Jan. 17	32 17 00	119 17 00	59	38	984	gy. m	L. B. T.
2920	Jan. 17	32 27 00	119 15 00	60	50.1	87	yl. s. brk. sh	S. D. and tangles.
2921	Jan. 17	32 27 00	119 14 15	60	51.5	145	fne. gy. s	S. D.
2922	Jan. 17	32 27 15	119 05 15	50	57.1	47	fne. gy. s	Do.
2923	Jan. 19	32 40 30	117 31 30	59	39	822	gn. m	L. B. T.
2924	Jan. 19	32 34 30	117 25 30	59	40.5	455	br. m	Do.
2925	Jan. 19	32 32 30	117 24 00	59	42.9	339	m	Do.
2926	Jan. 19	32 34 30	117 18 45	62	54.4	69	fne. gy. s	Do.
2927	Jan. 23	32 43 00	117 51 00	58	43.3	313	gn. m	Do.
2928	Jan. 23	32 47 30	118 10 00	59	41	417	bk. s. g	Do.
2929	Jan. 26	32 27 30	117 26 30	58		623	gn. m	S. B. T.
2930	Jan. 26	32 25 00	117 18 45	59	52.9	60	m	Do.
2931	Jan. 26	32 25 30	117 16 45	59	55.9	34	gy. s. sh	Do.
2932	Jan. 26	32 26 15	117 16 15	59	58	20	gy. s. brk. sh	Do.
2933	Jan. 26	32 28 45	117 16 15	59	57.3	36	fne. gy. s	S. D.
2934	Jan. 26	32 33 30	117 16 00	59	58.2	36	gy. s	L. B. T.
2935	Feb. 4	32 44 30	117 23 00	59	49.2	124	fne. gy. s	Do.
2936	Feb. 4	32 49 00	117 27 30	61	49	359	m	Do.
2937	Feb. 4	33 04 30	117 42 00	62	46.5	464	gn. m	Do.
2938	Feb. 5	33 35 15	118 08 30	58	58	47	fne. gy. s. st	Do.
2939	Feb. 5	33 36 00	118 09 30	59		27	fne. gy. s. st	Do.
2940	Feb. 5	33 36 00	118 11 00	59		26	fne. gy. s. brk. sh	Do.
2941	Feb. 5	33 37 15	118 12 00	59		26	sh. st	Do.
2942	Feb. 5	33 38 45	118 13 45	59		20	gy. s. brk. sh	Do.
2943	Feb. 6	34 00 30	119 28 30	59	56	31	rky	S. D.
2944	Feb. 6	34 00 00	119 28 30	59		30	rky	S. B. T.
2945	Feb. 6	34 00 00	119 29 30	59		30	p	Do.
2946	Feb. 6	33 58 00	119 30 45	59	56.5	150	crs. gy. s	L. B. T.
2947	Feb. 7	33 55 30	119 40 30	59		269	gy. s. g. brk. sh	Do.
2948	Feb. 7	33 55 30	119 41 30	59		266	gy. s. g. brk. sh	Do.
2949	Feb. 7	33 57 00	119 53 30	58		155	fne. gy. s	Do.
2950	Feb. 8	34 00 30	119 59 00	57	55.4	21	gy. s. brk. sh	Do.
2951	Feb. 8	33 55 30	119 55 00	56		48	fne. gy. s	Do.
2952	Feb. 8	33 50 00	119 57 00	57		57	brk. sh. r	Do.
2953	Feb. 8	33 47 00	119 58 15	57		82	gy. s. brk. sh	S. D.
2954	Feb. 8	33 42 30	119 59 30	57		65	g. sh. r	Do.
2955	Feb. 8	33 48 00	120 03 15	59	48.2	121	fne. gy. s. brk. sh	S. B. T.
2956	Feb. 8	33 57 30	120 18 30	58	53.1	52	fne. gy. s. r	Do.
2957	Feb. 9	34 04 00	120 19 30	58	54.9	26	gy. s. rky	S. D.
2958	Feb. 9	34 04 00	120 19 30	58	54.9	26	gy. s	Tangles.
2959	Feb. 9	34 06 45	120 18 00	59	51.9	55	gn. m. gy. s. brk. sh	L. B. T.
2960	Feb. 9	34 10 45	120 16 45	59	48	267	gn. m	Do.
2961	Feb. 11	34 22 45	119 40 30	58		21	gn. m	Do.
2962	Feb. 11	34 23 30	119 39 30	59		165	s. st. co	Do.
2963	Feb. 11	34 23 10	119 39 40	59		20	s. st. co	Tangles.
2964	Feb. 11	34 22 45	119 40 00	59		21.5	s. st	Do.
2965	Feb. 11	34 21 20	119 38 30	60	58	27	fne. gy. s. r	Do.
2966	Feb. 11	34 20 40	119 38 50	60	58.5	30	crs. m	Do.
2967	Feb. 11	34 21 15	119 39 10	60	58	30	crs. m	Do.
2968	Feb. 11	34 21 40	119 38 20	61	59	31	m	Do.
2969	Feb. 11	34 20 40	119 37 45	61	58	26	gy. s. p. st	Do.
2970	Feb. 11	34 20 20	119 37 30	61	59.1	29	fne. gy. s. m	L. B. T.
2971	Feb. 11	34 20 30	119 37 50	60	58.5	29	fne. gy. s. m	Do.
2972	Feb. 11	34 18 30	119 41 00	60	53.5	61	gn. m	Do.
2973	Feb. 11	34 19 30	119 44 15	60	54	68	gn. m	Do.
2974	Feb. 11	34 19 30	119 44 45	60	53.2	73	gn. m	Tangles.
2975	Feb. 12	34 01 30	119 29 00	60	57	36	g. brk. sh	L. B. T.
2976	Feb. 12	34 00 00	119 26 30	60	58	31	crs. g. s. brk. sh	S. B. T.
2977	Feb. 12	33 59 30	119 25 30	60	56.5	45	fne. gy. s. p	Do.
2978	Feb. 12	33 59 45	119 22 15	60	56.5	46	gy. s	Do.
2979	Feb. 12	33 56 30	119 22 30	60		388	gn. m	L. B. T.
2980	Feb. 12	33 49 45	119 24 30	62	38.9	603	gn. m	Do.
2981	Feb. 13	33 18 00	119 24 00	58		45	crs. gy. s. brk. sh	Do.
2982	Feb. 13	33 24 45	119 07 00	58	46.7	178	s. m. g	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Off Lower California.						
	1889.	° ′ ″	° ″	° F.	° F.	Fms.		
2983	Feb. 28	28 58 30	118 15 45	61	55.8	58	gy. s. brk. sh	S. B. T.
2984	Feb. 28	28 57 15	118 15 45	63	49.8	113	gy. s. brk. sh	Do.
2985	Feb. 28	28 57 00	118 16 30	65		36	brk. sh. r	Do.
2986	Feb. 28	28 57 00	118 14 30	64	38.5	684	fne. gy. s. brk. sh	L. B. T.
2987	Feb 28	28 54 15	118 18 00	63	46.3	171	gy. s. bk. sp. g	S. B. T.
2988	Mar. 2	24 58 30	115 52 30	65	63.9	34	coralline	Tangles.
2989	Mar. 2	24 58 15	115 53 00	64.5	64.3	36	coralline	S. D.
2990	Mar. 2	24 58 05	115 53 10	65	63.6	48	coralline	S. B. T.
		Revillagigedo Islands.						
2991	Mar. 6	18 18 30	114 40 00	72		341		L. B. T.
2992	Mar. 6	18 17 30	114 43 15	72	41.8	460	bk. s. r	Do.
2993	Mar. 6	18 17 15	114 44 30	72	43.5	364	gy. s. brk. sh	Do.
2994	Mar. 6	18 18 30	114 44 30	72	66.6	54	brk. co	S. D.
2995	Mar. 6	18 19 00	116 44 15	72	68.4	31	gy. s. brk. co	Do.
		Gulf of California.						
2996	Mar. 16	24 30 15	110 29 00	72	56	112	gn. m	L. B. T.
2997	Mar. 16	24 39 30	110 34 00	73	49.5	221	gn. m	Do.
2998	Mar. 16	24 51 00	110 39 00	72	64	40	s. brk. sh	Do.
2999	Mar. 16	24 54 30	110 39 00	72	63.6	39	crs. s	Do.
3000	Mar. 16	24 54 45	110 39 30	72	61.5	43	crs. s	Oyster dredge.
3001	Mar. 16	24 55 15	110 39 00	72	64.5	33	fne. gy. s. brk. sh	Do.
3002	Mar. 17	25 02 15	110 43 30	70		17	s. sh	Do.
3003	Mar. 17	25 02 25	110 43 30	70		9	s. sh	Do.
3004	Mar. 17	25 02 35	110 43 30	70		7.5	s. sh	L. B. T.
3005	Mar. 17	25 02 45	110 43 30	71		21	s. sh. coralline	Do.
3006	Mar. 17	25 02 30	110 43 30	75		8	shs	Do.
3007	Mar. 17	25 27 30	110 50 30	69	44.6	362	gn. m	Do.
3008	Mar. 18	25 59 45	111 03 30	67	46	306	m	Do.
3009	Mar. 20	27 09 00	111 42 00	66	37.7	857	gn. m	Do.
3010	Mar. 20	27 23 45	111 25 00	71	37.6	1,005	gn. m	Do.
3011	Mar. 23	28 07 00	111 39 45	69	57.9	71	fne. gy. s. brk. sh	Do.
3012	Mar. 23	28 16 00	111 54 00	69	63	22	fne. gy. s	Do.
3013	Mar. 23	28 23 45	111 58 00	66	65	14	gy. s. brk. sh	Do.
3014	Mar. 23	28 28 00	112 04 30	66	62.9	29	gy. s	Do.
3015	Mar. 24	29 19 00	112 50 00	63	54.9	145	br. m	Do.
3016	Mar. 24	29 40 00	112 57 00	65	59	76	gn. m	Do.
3017	Mar. 24	29 54 30	113 01 00	66.5	61.8	58	gn. m	Do.
3018	Mar. 24	30 16 00	113 05 00	66	63.3	36	gy. s. brk. sh	Do.
3019	Mar. 24	30 28 00	113 06 30	66	66	14	bk. s. brk. sh	Do.
3020	Mar. 24	30 37 30	113 07 00	65		7	gy. s. bk. sp	Do.
3021	Mar. 24	30 47 00	113 13 00	65		14	gy. s. brk. sh	Do.
3022	Mar. 24	30 58 30	113 17 15	66.1	66.1	11	gy. s. bk. sp	Do.
3023	Mar. 25	31 17 30	113 57 15	67		10	g. sh	Do.
3024	Mar. 25	31 21 00	113 49 00	67	67	11	s. brk. sh. g	Do.
3025	Mar. 25	31 21 15	113 59 00	67	66.1	9.5	fne. gy. s	Do.
3026	Mar. 25	31 22 00	114 07 45	66	65.2	17	g. brk. sh	Do.
3027	Mar. 26	31 31 45	114 19 00	68		10	gy. s	Do.
3028	Mar. 26	31 32 30	114 20 00	68		9.75	s	Do.
3029	Mar. 26	31 33 00	114 20 30	68		10.5	fne. gy. s. brk. sh	Do.
3030	Mar. 27	31 07 00	114 29 00	65	64	20	m	Do.
3031	Mar. 27	31 06 45	114 28 15	65	63.8	33	bn. m	Do.
3032	Mar. 27	31 05 30	114 29 00	65		12	gy. s	Do.
3033	Mar. 27	30 50 45	114 29 45	65.7	63.5	18	gy. m	Do.
3034	Mar. 27	30 36 30	114 27 45	69.5	63.5	24	gy. m	Do.
3035	Mar. 27	30 21 00	114 25 15	70	62	30	gy. m	Do.
3036	Mar. 29	29 47 15	114 24 00	67		5	m. s. brk. sh	Do.
3037	Mar. 31	27 45 00	110 45 00	69	65.2	20	gn. m	Do.
		Off Lower California.						
3038	Apr. 8	24 24 30	111 53 00	67	65.5	31	gy. s. brk. sh	L. B. T.
3039	Apr. 8	24 27 00	111 59 00	67	68.5	47	fne. yl. s	Do.
3040	Apr. 9	24 35 00	112 04 30	68		21	s. sh	Oyster dredge.
3041	Apr. 9	24 35 30	112 05 00	68	64.5	27	fne. gy. s	L. B. T.
3042	Apr. 9	24 38 00	112 05 30	67	65	17	fne. gy. s	Do.
3043	Apr. 10	26 07 00	113 32 00	64	55	74	fne. gy. s	Do.
3044	Apr. 10	26 16 15	113 42 15	64	56	58	gy. s. brk. sh	Do.
3045	Apr. 10	26 24 00	113 49 00	65	48	184	m	Do.
		Off Oregon and Washington.						
3046	June 7	46 48 30	124 28 00	56	46.1	48	fne. gy. s	L. B. T.
3047	June 7	46 47 00	124 30 15	57	45.9	50	fne. gy. s	Do.
3048	June 7	46 45 30	124 33 00	58	41.1	52	rky	Do.
3049	June 7	46 31 00	124 22 00	57	46.7	43	fne. blk. s	Do.
3050	June 8	44 01 15	124 57 00	54	56.1	46	co. brk. sh	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position.		Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Lat. N.	Long. W.					
		Off Oregon and Washington.						
	1889.	° ′ ″	° ′ ″	°F.	° F.	Fms.		
3051	June 8	43 59 15	124 58 30	55	-------	59	co. brk. sh. rky	Tangles.
3052	June 8	44 00 00	124 57 00	55	49	48	co. brk. sh. rky	Do.
3053	June 8	44 04 30	124 50 00	56	47.3	64	co. brk. sh. rky	Do.
3054	June 8	44 13 00	124 44 30	56	48	53	r	Do.
3055	June 9	44 41 30	124 09 15	57	47.4	28	fne. gy. s	L. B. T.
3056	June 9	44 41 30	124 09 15	57	47.4	28	fne. gy. s	Do.
3057	June 9	44 43 31	124 15 45	52	45.7	43	crs. gy. s	Do.
3058	June 9	44 48 00	124 10 00	53	45.8	38	crs. gy. s. sh	Do.
3059	June 9	44 56 00	124 12 30	53	45.1	77	m	Do.
3060	June 13	45 56 15	124 01 30	53	-------	28	br. m	Do.
3061	June 13	45 55 30	124 01 00	53	48.4	23	fne. blk. s	Do.
3062	June 13	46 55 45	124 05 00	54	45.2	44	fne. blk. s	Do.
3063	June 13	46 55 15	124 04 30	54	45.8	42	fne. gy. s	Do.
3064	June 13	46 03 15	124 09 00	58	45.6	46	fne. gy. s. g	Do.
3065	June 13	46 14 30	124 13 00	57	-------	27	fne. bk. s	Do.
3066	June 13	46 26 30	124 26 00	57	45.6	55	s. m	Do.
3067	June 18	47 36 00	122 23 15	56	-------	82	gn. m	Do.
3068	June 18	47 35 30	122 27 00	58	-------	135	gn. m	Do.
3069	June 28	47 25 30	125 42 00	56	37.6	760	gn. m	Do.
3070	June 28	47 29 30	125 43 00	57	37.9	636	gn. m	Do.
3071	June 28	47 29 00	125 33 30	55	38	685	gn. m	Do.
3072	June 28	47 28 30	125 24 00	55	38.2	584	gn. m	S. B. T.
3073	June 28	47 28 00	125 15 00	55	49.2	477	gn. m	Do.
3074	June 29	47 22 00	125 48 30	54	36.6	877	gn. m	L. B. T.
3075	June 29	47 22 00	125 41 00	57	36.6	859	gn. m	Do.
3076	June 29	47 46 00	125 10 00	59	43.4	178	gn. m	Do.
		Southeast Alaska.						
3077	July 23	55 46 00	132 24 00	60	42.4	322	gn. m. g	L. B. T.
		Off Oregon.						
3078	Sept. 1	43 59 15	124 46 00	60	45.7	68	g. m	S. B. T.
3079	Sept. 1	43 59 15	124 44 40	59	46.7	55	rky	Tangles.
3080	Sept. 1	43 58 00	124 34 00	60	45.6	93	gn. m	L. B. T.
3081	Sept. 1	43 59 00	124 20 00	58	45.8	61	gn. m. s	Do.
3082	Sept. 2	43 52 00	124 15 00	57	46.2	43	fne. gy. s	Do.
3083	Sept. 2	43 59 00	124 14 30	56	47.8	32	fne. gy. s. bk. sp	Do.
3084	Sept. 2	44 12 30	124 19 00	58	46.9	46	fne. gy. s. bk. sp	Do.
3085	Sept. 2	44 29 30	124 17 00	56	45.7	42	fne. gy. s	L. B. T.
3086	Sept. 3	44 36 00	124 18 30	54	46.2	46	fne. gy. s. bk. sp	Do.
3087	Sept. 3	44 28 00	124 26 00	56	45.9	46	c. and p	Tangles.
3088	Sept. 3	44 28 00	124 25 30	56	46.3	46	c. p	S. B. T.
3089	Sept. 7	45 40 30	123 58 45	56	-------	20	fne. gy. s	L. B. T.
3090	Sept. 7	45 43 00	124 12 00	57	45.8	62	fne. gy. s	Do.
3091	Sept. 8	45 32 00	124 19 30	56	-------	87	gn. m	Do.
3092	Sept. 8	45 31 15	124 05 00	56	45.9	46	bk. s	Do.
3093	Sept. 8	45 20 30	124 06 30	50	44.9	57	fne. gy. s	Do.
3094	Sept. 12	43 01 00	124 30 30	48	46.7	35	crs. s. sh	S. Dr.
3095	Sept. 12	42 44 45	124 38 10	48	47.0	42	r. st. brk. sh	Tangles.
3096	Sept. 12	42 45 00	124 36 15	48	46.7	33	st. brk. sh	Do.
		Off Central California.						
	1890.							
3097	Mar. 5	37 59 08	122 25 45	51	-------	12	bu. m	L. B. T.
3098	Mar. 5	37 58 25	122 26 30	51	-------	13	bu. m	Do.
3099	Mar. 10	37 44 50	122 43 00	51	50.8	20	fne. gy. s	Do.
3100	Mar. 10	37 43 20	122 43 00	51	50.4	29	cra. g	Do.
3101	Mar. 10	37 42 00	122 53 20	51	50.8	33	yl. s	Do.
3102	Mar. 10	37 40 40	122 59 00	51	51.8	27	c. brk. sh	Do.
3103	Mar. 10	37 38 00	123 02 30	49	57.9	67	fne. dk. s	Do.
3104	Mar. 11	37 23 00	123 08 00	49	40.8	391	c	Do.
3105	Mar. 11	37 21 00	123 00 00	51	44.2	217	fne. gy. s	Do.
3106	Mar. 11	37 21 00	122 51 00	51	-------	77	fne. gy. s	Do.
3107	Mar. 11	37 20 00	122 44 00	52	-------	51	fne. gy. s	Do.
3108	Mar. 11	37 19 00	122 36 00	53	50.8	43	r. brk. sh	Do.
3109	Mar. 11	37 18 30	122 35 00	53	50.8	40	rky	Tangles.
3110	Mar. 11	37 19 00	122 32 00	53	51.0	39	rky	Do.
3111	Mar. 11	37 13 30	122 26 00	53	52.8	20	gy. s	Do.
3112	Mar. 12	37 08 00	122 47 00	52	41.8	296	fne. gy. s	L. B. T.
3113	Mar. 12	37 06 40	122 37 30	52	48.8	70	fne. gy. s	Do.
3114	Mar. 12	37 06 00	122 32 00	52	-------	62	m	Do.
3115	Mar. 12	37 05 00	122 24 00	52	-------	43	fne. bk. s	Do.
3116	Mar. 12	37 05 30	122 19 00	54	-------	16	rky	S. Dr.
3117	Mar. 12	37 01 20	122 18 20	52	50.7	43	bk. s. m	L. B. T.
3118	Mar. 12	36 57 10	122 18 00	55	50.9	54	rky. co	S. Dr.
3119	Mar. 12	36 56 30	122 17 40	55	50.9	54	rky. co	Tangles.
3120	Mar. 12	36 55 40	122 15 10	54	49.7	54	gn. m. s. r	Do.
3121	Mar. 12	36 57 20	122 15 00	53	49.8	48	gn. m. s	Do.
3122	Mar. 12	36 59 00	122 15 00	52	52.3	38	gy. s. m	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position.		Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Lat. N.	Long. W.					
		Off Central California.						
	1890.	° ′ ″	° ′ ″	°F.	°F.	*Fms.*		
3123	Mar. 12	36 57 00	122 10 00	54	52.8	37	fne. gy. s. m	Tangles.
3124	Mar. 13	36 55 10	122 04 00	51	52.3	21	rky	L. B. T.
3125	Mar. 13	36 52 00	122 11 00	52	48.4	65	fne. gy. s. sh	L. B. T. and mud bag.
3126	Mar. 13	36 49 20	122 12 30	53	52.8	456	gn. m	L. B. T.
3127	Mar. 13	36 45 00	122 10 20	53	40.5	418	gn. m. s	L. B. T. and mud bag.
3128	Mar. 13	36 41 50	122 07 30	53	38.9	627	bu. m	Do.
3129	Mar. 13	36 39 40	122 01 00	57	43.7	204	s. and m	Do.
3130	Mar. 14	36 36 40	121 53 00	58		9	s	S. B. T.
3131	Mar. 14	36 41 30	121 54 10	58	50.8	48	br. m. r	Do.
3132	Mar. 14	36 44 00	121 51 00	55	52.1	33	br. m	Do.
3133	Mar. 14	36 47 50	121 49 00	55	52.3	37	br. m	Do.
3134	Mar. 14	36 51 40	121 51 20	54	54.5	13	fne. s. m	L. B. T
3135	Mar. 14	36 54 10	121 55 00	54	54.7	15	fne. gy. s	Do.
3136	Mar. 15	36 57 00	122 01 00	52		7	gy. s	S. B. T.
3137	Mar. 15	36 56 00	122 01 20	52		11	s. p	Do.
3138	Mar. 15	36 55 30	122 02 00	52	55.4	19	fne. s. m. st	S. Dr.
3139	Mar. 15	36 54 10	122 03 00	52	52.9	27	gn. m	Do.
3140	Mar. 15	36 54 30	122 05 00	52	52.3	30	m	Do.
3141	Mar. 15	36 56 00	122 06 00	52	53	24	fne. gy. s. m	Do.
3142	Mar. 15	36 56 20	122 03 20	52		13	fne. s. rky	Do.
3143	Mar. 15	36 56 10	122 02 40	53		9	rky	Do.
3144	Mar. 15	36 55 40	122 03 10	54		20	s. g. r. m	Do.
3145	Mar. 15	36 51 05	122 05 30	54	49.5	56	fne. gy. s	L. B. T.
3146	Mar. 15	36 53 30	122 12 00	54	49.5	62	gn. m. r	S. B. T.
3147	Mar. 15	37 00 00	122 20 00	55	49.2	56	br. m	Do.
3148	Mar. 15	37 08 00	122 28 10	54	51.3	47	br. m	Do.
3149	Mar. 15	37 13 50	122 32 30	54	51.1	45	gn. m	Do.
3150	Mar. 21	37 47 00	122 44 10	55	52.3	21	fne. gy. s	L. B. T.
3151	Mar. 21	37 49 00	122 55 30	55	51.6	37	crs. s. rd. sp	Do.
3152	Mar. 21	37 53 30	122 56 30	55	50.6	36	fne. gy. s	Do.
3153	Mar. 21	37 57 10	122 56 20	52	51.3	32	gn. m	Do.
3154	Mar. 21	37 59 20	122 55 30	52	51.8	20	bk. s. m	Do.
3155	Mar. 22	37 57 30	122 59 00	52		35	gn. m	Do.
3156	Mar. 22	37 53 30	123 04 00	52	45.3	50	s	Do.
3157	Mar. 22	37 49 30	123 06 00	53	50.6	47	fne. gy. s	T. B. T.
3158	Mar. 22	37 47 30	123 10 40	53	51.4	29	rky	Tangles.
3159	Mar. 22	37 47 20	123 10 00	53		27	rky	Do.
3160	Mar. 22	37 48 35	123 12 40	52	51.8	39	rky	Do.
3161	Mar. 22	37 49 30	123 23 40	52	44.5	191	fne. gy. s	L. B. T. and mud bag.
3162	Mar. 22	37 54 10	123 30 00	53	39	552	gn. m	L. B. T.
3163	Mar. 22	37 56 40	123 25 30	52	48.5	69	fne. gy. s	Do.
3164	Mar. 23	37 59 40	123 14 25	50	48.5	61	rky	S. Dr.
3165	Mar. 23	37 59 45	123 08 35	50	49	50	gn. m	Do.
3166	Mar. 23	37 57 30	123 04 30	52	50.3	47	gn. m	S. B. T.
3167	Mar. 23	37 57 30	122 59 30	52	49.5	33	gn. m	Do.
3168	Mar. 24	38 01 25	123 26 55	52		34	rky. co	Tangles.
3169	Mar. 28	38 16 30	123 30 00	52	44	202	m	L. B. T.
3170	Mar. 28	38 17 00	123 29 00	52		167	m	Do.
3171	Mar. 28	38 20 30	123 20 00	52	48	76	rky. s	Do.
3172	Mar. 28	38 23 35	123 14 00	52	48	62	bk. s	Do.
3173	Mar. 28	38 19 25	123 14 30	52	48.2	62	m	S. B. T. and mud bag.
3174	Mar. 28	38 15 30	123 14 15	53	49.5	65	gn. m	L. B. T.
3175	Mar. 29	38 07 35	123 13 30	49		57	br. m	Do.
3176	Mar. 29	38 01 30	123 06 00	49		37	gy. s	Do.
3177	Mar. 29	37 59 30	123 03 05	50		25	crs. s. g	S. B. T.
3178	Mar. 29	37 57 00	122 57 25	50	49	32	s	L. B. T.
3179	Mar. 29	37 53 30	122 52 00	53	50	30	fne. gy. s	Do.
3180	Mar. 29	37 50 00	122 47 00	53	50.7	24	fne. gy. s	L. B. T. and mud bag.
3181	Mar. 29	37 50 10	122 41 30	53	51	16	fne. gy. s	L. B. T.
3182	Mar. 29	37 49 50	122 37 10	54	52.2	11	fne. gy. s	Do.
3183	Apr. 3	36 31 00	121 59 00	52	44.5	162	gy. s. r	S. B. T.
3184	Apr. 3	36 26 40	122 00 05	51	46.4	77	s. g	Do.
3185	Apr. 3	36 27 10	121 57 00	51	48.4	41	crs. s	Do.
3186	Apr. 3	36 18 50	122 06 00	52	41.3	328	bk. s. m	L. B. T.
3187	Apr. 3	36 14 00	121 58 40	54	41.1	298	yl. s. m	Do.
3188	Apr. 3	36 08 15	121 49 40	54	45	316	gn. m	Do.
3189	Apr. 4	35 45 30	121 29 00	54	43.2	218	m	Do.
3190	Apr. 4	35 40 30	121 22 40	54	49	53	fne. gy. s	Do.
3191	Apr. 4	35 35 15	121 23 00	53	44	211	br. m	Do.
3192	Apr. 4	35 33 40	121 15 00	52	47.2	101	bk. s. m	Do.
3193	Apr. 5	35 25 50	121 09 10	51	44.4	160	gn. m	Do.
3194	Apr. 5	35 23 30	121 02 30	53	45.9	92	gy. s	Do.
3195	Apr. 5	35 14 00	121 07 00	54	43.2	252	gn. m	Do.
3196	Apr. 5	35 02 55	120 59 40	54	44.1	200	gn. m	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Off Central California.						
	1890.	° ′ ″	° ′ ″	° *F.*	° *F.*	*Fms.*		
3197	Apr. 5	35 01 30	120 50 30	53	48.4	77	gn. m	L. B. T.
3198	Apr. 6	34 19 25	120 38 30	53	42.1	278	gn. m	L. B. T. and mud bag.
3199	Apr. 6	34 16 45	120 25 30	52	43.9	233	gn. m	L. B. T.
3200	Apr. 6	34 15 00	120 14 30	52	43.1	265	gn. m	Do.
3201	Apr. 6	34 14 45	119 54 00	55	42.9	280	gn. m	Do.
3202	Apr. 11	36 46 10	121 58 45	52	41.1	382	gn. m	Do.
3203	Apr. 11	36 48 00	121 53 50	54	44.7	138	br. m	Do.
3204	Apr. 12	36 54 45	122 20 15	55	44.1	202	bk. s	Do.
3205	Apr. 12	36 55 10	122 23 50	51	43.7	240	bk. s. r	Do.
3206	Apr. 12	36 57 30	122 27 30	51	-------	169	----------	Do.
3207	Apr. 12	37 00 30	122 35 30	50	45.8	108	fne. gy. s	Do.
3208	Apr. 12	37 01 10	122 39 45	50	44.3	203	fne. gy. s	Do.
3209	Apr. 12	37 05 15	122 42 05	50	45.4	141	gn. m	Do.
		South of Alaska Peninsula.						
3210	May 21	54 00 00	162 40 30	43	38.5	483	s. gn. m	L. B. T.
3211	May 21	54 02 00	162 52 00	44	38.7	313	gn. m	Do.
3212	May 21	54 05 30	162 54 00	43	38	49	gy. s. bk. sp	Do.
3213	May 21	54 10 00	162 57 30	40	-------	41	bk. s	Do.
3214	May 21	54 13 00	163 06 00	40	-------	38	gy. s. g	Do.
3215	May 21	54 14 40	163 24 00	43	38.5	43	g	Do.
3216	May 21	54 20 30	163 37 00	43	-------	61	bk. s. m	Do.
3217	May 22	54 14 50	164 06 00	42	-------	42	bk. g	Do.
3218	May 22	54 15 40	164 21 00	42	37.7	41	bk. s	Do.
3219	May 22	54 14 00	164 35 06	42	38	59	bk. s. g	Do.
		Bering Sea.						
3220	May 22	54 15 00	165 06 00	42	-------	34	g. brk. sh	L. B. T.
3221	May 22	54 15 20	165 23 30	42	39.1	66	bk. s. sh	Do.
3222	May 22	54 20 00	165 30 00	40	39.7	50	bk. s. p. sh	Do.
3223	May 22	54 26 15	165 32 00	42	39	56	bk. p	Do.
3224	May 22	54 42 50	165 37 00	43	38.7	121	bk. s. g	Do.
3225	May 22	54 48 30	165 49 00	41	38.6	85	bk. s	Do.
3226	May 23	55 01 00	167 25 00	42	38.5	128	m. s. sh	S. B. T.
3227	May 23	54 36 30	166 54 00	42	38.6	225	gn. m	L. B. T.
3228	May 31	58 39 20	157 17 30	49	-------	8	gy. s. p	S. B. T.
3229	May 31	58 40 00	157 15 00	50	-------	8	gy. s. p	Do.
3230	May 31	58 31 30	157 13 30	50	-------	3.25	gy. s. p	Do.
3231	June 2	58 35 00	157 28 50	47	-------	12	s	L. B. T.
3232	June 2	58 31 30	157 34 15	47	-------	10.5	p. st	Do.
3233	June 2	58 23 45	157 42 45	45	44.5	7.25	s. p	Do.
3234	June 2	58 27 00	157 52 00	47	-------	5	gy. s	Do.
3235	June 7	58 16 30	158 13 00	44	-------	11	bk. s	Do.
3236	June 7	58 11 00	158 05 30	42	39	14.75	g. s. sh	Do.
3237	June 7	58 08 00	158 19 00	41	-------	19	gy. s. g. sh	Do.
3238	June 7	58 03 40	158 37 30	39	-------	18	fne. gy. s	Do.
3239	June 8	58 22 20	159 23 15	44	-------	11.5	fne. gy. s	Do.
3240	June 8	58 30 00	159 35 50	43	-------	14.5	fne. bk. s	Do.
3241	June 8	58 38 30	159 33 30	47	38	14	bk. m	Do.
3242	June 8	58 44 30	160 08 45	45	-------	11	bk. m	Do.
3243	June 8	58 45 10	160 28 00	46	-------	4.5	fne. gy. s	Do.
3244	June 9	58 37 20	161 05 00	43	-------	4.5	fne. gy. s	Do.
3245	June 9	58 31 20	161 13 00	44	-------	11.5	s. and p	Do.
3246	June 9	58 26 30	161 36 00	40	38	17.5	g	Do.
3247	June 13	58 40 45	162 08 30	43	40.6	17	p. st	Do.
3248	June 13	58 34 15	162 22 00	41	43	21	fne. gy. s. g	Do.
3249	June 13	58 27 30	162 36 00	39	37	13.5	fne. gy. s. bk. sp	Do.
3250	June 13	58 11 30	163 02 45	40	46.2	17.5	gy. s	Do.
3251	June 14	57 35 50	164 05 00	39	37.5	25.5	fne. gy. s	Do.
3252	June 14	57 22 20	164 24 40	40	44.8	29.5	bk. m	Do.
3253	June 14	57 05 50	164 27 15	42	35	36	m. s	Do.
3254	June 14	56 50 00	164 27 50	43	36.2	46	gn. m. s	Do.
3255	June 14	56 33 30	164 31 40	44	37	43	gn. m. s	L. B. T. and surface tow net.
3256	June 14	56 18 00	164 34 10	45	35	49	gn. m. bk. sh	L. B. T.
3257	June 24	54 49 00	165 32 00	45	39	81	gy. s. g	Do.
3258	June 24	54 48 00	165 13 30	44	39	70	bk. s. g	Do.
3259	June 24	54 40 50	165 05 30	44	40.6	41	bk. s. g	Do.
3260	June 24	54 36 15	164 52 00	44	42	13	fne. bk. s	Do.
3261	June 24	54 42 15	164 49 15	45	41.2	27	bk. g. p	Do.
3262	June 24	54 49 30	165 02 00	45	40.7	43	bk. s. r	Do.
3263	June 24	55 04 00	165 04 00	45	39.5	61	bk. m	Do.
3264	June 24	54 57 00	164 48 00	45	40.5	40	crs. s. g	Do.
3265	June 25	55 16 30	163 52 45	45	39.8	38	bk. s	Do.
3266	June 25	55 08 30	163 30 30	45	42	24	bk. s	Do.
3267	June 25	55 23 30	163 29 00	46	41	32	bk. s	Do.
3268	June 25	55 29 00	163 13 00	47	41.2	26	bk. s. g	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Bering Sea.						
	1890.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
3269	June 25	55 19 00	163 04 30	44	42.3	16	fne. gy. s. bk. sh	L. B. T.
3270	June 26	55 26 30	162 52 00	47	43.5	16	bk. s	Do.
3271	June 26	55 29 15	162 58 00	47	41.9	25	bk. s	Do.
3272	June 27	55 31 40	163 07 00	45	42	31	bk. and rd. s	Do.
3273	June 27	55 44 30	162 56 00	45	38.5	39	gy. s. m	Do.
3274	June 27	55 34 30	162 31 45	45		19	bk. s. sh	Do.
3275	June 27	55 44 20	162 17 30	45	42.8	22	fne. bk. s	Do.
3276	June 28	55 51 15	162 03 00	43	42	18	g. s. r	S. B. T.
3277	June 28	55 58 45	161 46 30	46	43.2	18	g. s. r	Tangles.
3278	June 28	56 12 30	162 13 00	44	38.8	47	fne. gy. s	L. B. T.
3279	June 28	56 25 40	162 39 15	55	37	41	fne. gy. s	Do.
3280	June 28	56 27 00	162 08 00	55	41	36	fne. gy. s	Do.
3281	June 28	56 14 00	161 41 15	55		36	gy. s. bk. sp	Do.
3282	June 29	56 30 45	161 50 15	55	38.2	53	fne. s. gn. m	Do.
3283	June 29	56 28 00	161 16 30	44	40.3	39	fne. gy. s	Do.
3284	June 29	56 16 30	160 53 00	47	43	25	fne. g	Do.
3285	July 17	56 45 45	160 42 45	44	41	35	gy. s. bk. sp	Do.
3286	July 17	56 39 30	160 29 00	45	41.5	37	fne. gy. s. sh. g	Do.
3287	July 17	56 33 00	160 14 00	46	42	30	crs. bk. s	Do.
3288	July 17	56 26 30	160 00 00	46	45.5	15	bk. g	Do.
3289	July 18	56 44 30	159 16 00	45		16	bk. s	Do.
3290	July 18	56 50 30	159 01 00	47		16	gy. s. g	Do.
3291	July 18	56 58 30	159 11 00	45	41.2	26	bk. s. g	Do.
3292	July 18	57 14 00	159 35 00	45		32	bk. s. g	Do.
3293	July 18	57 30 00	159 33 00	44	40	30	fne. gy. s	Do.
3294	July 18	57 16 45	159 03 30	45	41	30	bk g	Do.
3295	July 19	57 14 30	158 26 30	50		11.5	fne. gy. s	Do.
3296	July 19	57 26 30	158 46 00	47	43	24	gy. s. bk. sp	Do.
3297	July 19	57 38 00	159 07 30	47	41.5	26	gy. s	Do.
3298	July 19	57 38 30	158 22 30	48	43.8	20	fne. gy. s	Do.
3299	July 20	57 59 00	158 44 00	54	44	20	fne. gy. s. yl. sp	Do.
3300	July 20	58 12 30	159 55 00	51	42.2	15	p	Do.
3301	July 20	58 12 45	160 37 30	52		17	fne. gy. s	Do.
3302	July 21	57 45 45	160 12 15	51	40.2	30	fne. gy. s	Do.
3303	July 21	57 27 00	160 23 30	50	39.5	33	bk. s	Do.
3304	July 21	58 02 30	161 13 45	49		28	fne. gy. s	C. R. D.
3305	July 22	57 51 30	161 40 00	56	41.8	23	fne. gy. s	Do.
3306	July 22	57 24 30	161 17 00	52	38.9	33	fne. gy. s	Do.
3307	Aug. 3	53 55 00	170 50 00	50	35.4	1,033	gn. oz	D. S. T.
3308	Aug. 4	56 12 00	172 07 00	50	35	1,625	gn. oz	Do.
3309	Aug. 4	56 56 00	172 55 00	50	37.9	71	gn. m	L. B. T.
3310	Aug. 15	53 56 51	166 28 53	54	41.5	58	fne. dk. s. m	S. B. T.
3311	Aug. 15	53 59 36	166 29 43	52	41	85	gn. m	Do.
3312	Aug. 15	53 59 11	166 25 09	55	43	45	fne. s. m	Do.
3313	Aug. 15	54 01 51	166 27 38	55	42.7	68	fne. bk. s	Do.
3314	Aug. 15	54 02 24	166 32 47	55	42.5	74	bk. s	Do.
3315	Aug. 15	54 02 40	166 42 00	55	38.5	277	gn. m. s	Do.
3316	Aug. 16	54 01 00	166 48 45	56	38.2	309	bk. s. g	Do.
3317	Aug. 16	53 57 40	166 59 00	54	39.5	165	crs. s. g. r	Do.
3318	Aug. 16	53 47 40	167 14 00	52	42	61	bk. s. g. sh	Do.
3319	Aug. 18	53 40 30	167 30 00	52	40.8	59	bk. s	L. B. T.
3320	Aug. 18	53 40 00	167 29 45	52	40.8	59	bk. s. co	Tangles.
3321	Aug. 18	53 33 30	167 15 40	50	41.5	54	dk. m	L. B. T.
3322	Aug. 18	53 28 45	167 23 50	50	42.4	35	bk. s	Do.
3323	Aug. 19	53 26 00	167 31 10	46	42	51	fne. bk. s	Do.
3324	Aug. 20	53 33 50	167 46 50	47		109	crs. bk. s. g. r	Do.
3325	Aug. 20	53 37 10	167 50 10	49	38	284	gn. m	Do,
3326	Aug. 20	53 40 25	167 41 40	49	37.5	576	m	Do.
3327	Aug. 20	53 43 40	167 29 30	49	38.2	322	bk. s	S. B. T.
3328	Aug. 21	53 41 45	167 19 25	48	37	578	m	L. B. T.
3329	Aug. 21	53 56 50	167 08 15	51	37.7	399	fne. bk. s	Do.
3330	Aug. 21	54 00 45	166 53 50	51	37.8	351	bk. s. m	Do.
3331	Aug. 21	54 01 40	166 48 50	52		350	m	Do.
3332	Aug. 21	54 02 50	166 45 00	52		406	rky. s	Do.
3333	Aug. 22	53 53 35	166 30 15	48	43.9	19	gn. m	S. B. T.
3334	Aug. 22	53 56 20	166 29 15	48	42.6	50	m. s	Do.
3335	Aug. 22	53 58 05	166 33 25	47	40.8	93	m	Do.
3336	Aug. 22	53 56 55	166 33 35	50	41.6	55	fne. bk. s	Do.
		Unalaska to Kadiak.						
3337	Aug. 27	53 55 30	163 26 00	51	39.3	280	gn. mr	L. B. T.
3338	Aug. 28	54 19 00	159 40 00	51	37.3	625	gn. m. s	Do.
3339	Aug. 28	54 46 00	157 43 30	52	37.4	138	m. g	Do.
3340	Aug. 29	55 26 00	155 26 00	52	36.8	695	m	Do.
3341	Aug. 29	56 01 30	153 52 00	54	41.1	67	fne. gy. s	Do.
		Off British Columbia.						
3342	Sept. 3	52 39 30	132 38 00	57	35.3	1,588	gy. oz. crs. s	L. B. T.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position.		Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Lat. N.	Long. W.					
		Off Washington.						
	1890.	° ′ ″	° ′ ″	° *F.*	° *F.*	*Fms.*		
3343	Sept. 21	47 40 40	125 20 00	54	38.2	516	gn. m	L. B. T.
3344	Sept. 21	47 20 00	125 07 30	52	36.8	831	gn. m	Do.
3345	Sept. 22	45 39 00	124 53 00	57	37.3	759	gn. m	Do.
3346	Sept. 22	45 30 00	124 52 00	54	37.3	786	gn. m	Do.
3347	Sept. 22	45 09 35	124 45 00	54	40.9	345	m	Do.
		Off Northern California.						
3348	Sept. 25	39 02 40	124 06 15	54	47.6	455	fne. gy. s.	L. B. T.
3349	Sept. 25	38 57 45	124 03 05	54	44.1	239	bk. s	Do.
3350	Sept. 25	38 58 10	123 57 05	54	48.4	75	fne. s. m	Do.
3351	Sept. 25	38 59 40	123 50 50	54	50	51	m	S. B. T.
3352	Sept. 25	39 01 10	123 44 00	54	51.5	26	fne. br. s	Do.
	1891.	*Off Panama.*						
3353	Feb. 23	7 06 15	80 34 00	73	39	695	gn. m	L. B. T.
3354	Feb. 23	7 09 45	80 50 00	78	46	322	gn. m	Do.
3355	Feb. 23	7 12 20	80 55 00	81	54.1	182	bk. g. sh	Do.
3356	Feb. 23	7 09 30	81 08 30	83	40.1	546	sft. bl. m	Do.
3357	Feb. 24	6 35 00	81 44 00	83	38.5	782	gn. s	Do.
3358	Feb. 24	6 30 00	81 44 00	83	40.2	555	gn. s	Do.
3359	Feb. 24	6 22 20	81 52 00	83	42	465	rky	Tangles.
3360	Feb. 24	6 17 00	82 05 00	83	36.4	1,672	fne. bk. & gn. s.	L. B. T.
3361	Feb. 25	6 10 00	83 06 00	82	36.6	1,471	gn. oz	Do.
3362	Feb. 26	5 56 00	85 10 30	84	36.8	1,175	gn. m. s. r	L. B. T.
3363	Feb. 26	5 43 00	85 50 00	83	37.5	978	wh. glob. oz	Do.
3364	Feb. 27	5 30 00	86 08 30	81	38	902	yl. glob. oz	Do.
3365	Feb. 27	5 31 00	86 31 00	85	37	1,010	yl. glob. oz	Agassiz, B. T.
3366	Feb. 27	5 30 00	86 45 00	84	37	1,067	yl. glob. oz	L. B. T.
3367	Feb. 28	5 31 30	86 52 30	82	57	100	rky	S. B. T.
3368	Feb. 28	5 32 45	86 54 30	82	58.4	66	rky	Do.
3369	Feb. 28	5 32 45	86 55 20	82	62.2	52	rky	L. B. T. *a*
3370	Feb. 28	5 36 40	86 56 50	84	54.8	134	r. sh	Tangles.
3371	Mar. 1	5 26 20	86 55 00	82	39	770	glob. oz	Agassiz, B. T.
3372	Mar. 1	4 49 00	86 11 20	84	38.8	761	gy. glob. oz	Do.
3373	Mar. 2	4 02 00	84 58 00	82	36.6	1,977	bn. m. bk. sp	Do.
3374	Mar. 3	2 35 00	83 53 00	80	36.4	1,823	gn. oz	L. B. T.
3375	Mar. 4	2 34 00	82 29 00	77	36.6	1,201	gy. glob. oz	L. B. T., mud bag.
3376	Mar. 4	3 09 00	82 08 00	78	36.3	1,132	gy. glob. oz	Do.
3377	Mar. 5	3 56 00	81 40 15	77	38	764	m	Do.
3378	Mar. 5	3 58 20	81 36 00	78	55.9	112	brk. sh	S. B. T.
3379	Mar. 5	3 59 40	81 35 00	78		52	r	Tangles.
3380	Mar. 5	4 03 00	81 31 00	79	37.2	899	r	L. B. T.
3381	Mar. 6	4 56 00	80 52 30	77	35.8	1,772	gn. m	Do.
3382	Mar. 7	6 21 00	80 41 00	75	35.8	1,793	gn. m	Do. *b*
3383	Mar. 8	7 21 00	79 02 00	74	36	1,832	gn. glob. oz	Do.
3384	Mar. 8	7 31 30	79 14 00	74	42	458	gn. s	Do.
3385	Mar. 8	7 32 36	79 16 00	72	45.9	286	gn. m	Do.
3386	Mar. 8	7 33 12	79 17 15	73	48	242	fne. gy. s.	Do.
3387	Mar. 8	7 40 00	79 17 50	74	56.2	127	fne. gy. s.	Do.
3388	Mar. 9	7 06 00	79 48 00	73	36.2	1,168	gn. glob. oz	Do.
3389	Mar. 9	7 16 45	79 56 30	74	48.8	210	gn. m	Do.
3390	Mar. 9	7 26 10	79 53 50	74	62.6	56	fne. gy. s. g	Do.
3391	Mar. 9	7 33 40	79 43 20	73	55.8	153	gn. m	Do.
3392	Mar. 10	7 05 30	79 40 00	73	36.4	1,270	hrd	Do.
3393	Mar. 10	7 15 00	79 36 00	74	36.8	1,020	gn. m	Do.
3394	Mar. 10	7 21 00	79 35 00	73	41.8	511	dk. gn. m	Do.
3395	Mar. 11	7 30 36	78 39 00	70	38.5	730	rky	Do.
3396	Mar. 11	7 32 00	78 36 30	70	47.4	259	hrd. gy. m. s	Do.
3397	Mar. 11	7 33 00	78 34 20	71	57.3	85	sft. gn. m. brk. sh.	Do.
3398	Mar. 23	1 07 00	80 21 00	84	36	1,573	gn. oz	Blake B. T.
3399	Mar. 24	1 07 00	81 04 00	80	36	1,740	gn. oz	L. B. T.
		Off Galapagos Islands.						
		Lat. S.						
3400	Mar. 27	0 36 00	86 46 00	81	36.1	1,322	lt. gy. glob. oz	L. B. T.
3401	Mar. 28	0 59 00	88 58 30	82	43.8	395	glob. oz	Do.
3402	Mar. 28	0 57 30	89 03 30	82	42.3	421	r. glob. oz	S. B. T.
3403	Mar. 28	0 58 30	89 17 00	82	43.3	384	fne. gy. s. bk. sp	Do.
3404	Mar. 28	1 03 00	89 28 00	83	43.2	385	r	Do.
3405	Mar. 28	0 57 00	89 38 00	83	59.9	53	p. co. sh	Tangles.
3406	Apr. 3	0 16 00	90 21 30	81	41.3	551	r	S. B. T.
3407	Apr. 3	0 04 00	90 24 30	81	37.2	885	glob. oz	L. B. T.
		Lat. N.						
3408	Apr. 3	0 12 30	90 32 30	83	39.5	684	glob. oz	L. B. T.
3409	Apr. 3	0 18 40	90 34 00	82	42.3	327	bk. s	S. B. T.
3410	Apr. 3	0 19 00	90 34 00	82	44	331	bk. s	Do.

a Bottom also known as Nullipore.

b Three trials submarine tow net.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Off Galapagos Islands.						
	1891.	° ′ ″	° ′ ″	° F.	° F.	Fms.		
3411	Apr. 4	0 54 00	91 09 00	82	36.2	1,189	yl. glob. oz	L. B. T.
3412	Apr. 4	1 23 00	91 43 00	82	38	918	r	Do.
3413	Apr. 5	2 34 00	92 06 00	82	36	1,360	glob. oz. dk. sp	Do.
		Off Mexico.						
3414	Apr. 8	10 14 00	96 28 00	82	35.8	2,232	gn. m	L. B. T.,*a*
3415	Apr. 10	14 46 00	98 40 00	83	36	1.879	bn. m. glob. oz	Do.
3416	Apr. 11	16 32 30	99 42 40	81	40.5	419	bn. m	Do.
3417	Apr. 11	16 32 00	99 48 00	82	40.6	493	gn. m	S. B. T.
3418	Apr. 11	16 33 00	99 52 30	82	39	660	bn. s. bk. sp	Do.
3419	Apr. 11	16 34 30	100 03 00	81	39	672	gn. m. bk. sp	Do.
3420	Apr. 12	16 46 00	100 08 20	82	39.6	664	dk. gn. m	Do.
3421	Apr. 12	16 47 20	100 00 10	82	42.9	388	dk. gn. m	Do.
3422	Apr. 12	16 47 30	99 59 30	83	53.3	141	gn. m	Do.
3423	Apr. 12	16 47 30	99 59 20	83	55.8	94	gn. m	Do.
3424	Apr. 18	21 15 00	106 23 00	76	38	676	gy. s. bk. sp	Do.
3425	Apr. 18	21 19 00	106 24 00	76	39	680	gn. m. s	Do.
3426	Apr. 18	21 21 00	106 25 00	76	51.2	146	rky	Do.
3427	Apr. 18	21 22 15	106 25 00	76	51.2	80	rky	Tangles.
3428	Apr. 18	21 36 30	106 25 00	76	48.1	238	dk. gy. s	S. B. T.
3429	Apr. 19	22 30 30	107 01 00	73	37.5	919	gn. oz. rky	Do.
3430	Apr. 19	23 16 00	107 31 00	73	37.9	852	bk. s	Do.
		Gulf of California.						
3431	Apr. 20	23 59 00	108 40 00	70	37	995	lt. bn. m	S. B. T.
3432	Apr. 20	24 22 30	109 03 20	70	37.8	1,421	bn. m. bk. sp	L. B. T.
3433	Apr. 21	25 26 15	109 48 00	69	36.5	1,218	bn. m. bk. sp	S. B. T.
3434	Apr. 21	25 29 30	109 48 00	70	36.4	1,588	bn. m. bk. sp	Do.
3435	Apr. 22	26 48 00	110 45 20	70	37.3	859	bn. m. bk. sp	Do.
3436	Apr. 22	27 03 40	110 53 40	72	37.2	905	bn. m. bk. sp	Do.
3437	Apr. 23	27 39 40	111 00 30	70	40	628	bn. m. bk. sp	Submarine tow net.
		Bering Sea.						
3438	Aug. 3	57 06 30	170 22 30	45		20	fne. gy. s. sh	S. B. T.
3439	Aug. 3	57 06 00	170 35 00	44	44	41	fne. bk. s	Do.
3440	Aug. 3	57 05 00	170 41 00	46		48	bk. m. sh	Do.
3441	Aug. 3	57 04 20	170 52 30	48	39	51	bk. m. sh	Do.
3442	Aug. 3	57 10 00	170 47 15	50	40	47	bl. m. sh	Do.
		Off Washington.						
3443	Aug. 27	48 13 30	123 11 20	57	46	97	gn. m. p	L. B. T.
3444	Aug. 27	48 16 30	123 29 40	56	45	80	gn. m. p	Do.
3445	Aug. 27	48 16 00	123 45 05	65	44	100	rky	Do.
3446	Aug. 27	48 18 50	123 58 20	53	44.5	100	bu. m	Do.
3447	Aug. 28	48 30 15	124 36 20	54	44	116	gy. s	Do.
3448	Aug. 28	48 31 40	124 39 00	55	44	98	gy. s	Do.
3449	Aug. 28	48 29 40	124 40 10	55		135	gy. s. g	Do.
3450	Aug. 28	48 26 50	124 39 35	53	44	151	g	Do.
3451	Aug. 28	48 25 10	124 37 50	53	45	106	g. st	Do.
3452	Aug. 29	48 24 40	124 29 10	53	44.5	125	rky. bk. g	Do.
3453	Aug. 29	48 20 00	124 13 40	57	44.4	120	gy. s. bk. sp	Do.
3454	Sept. 1	48 27 50	124 42 40	54	44.2	152	gy. s. rky	Do.
3455	Sept. 1	48 28 40	124 43 50	54	44.3	152	gy. s. rky	Do.
3456	Sept. 1	48 31 15	124 43 15	55	44.2	136	gy. s	Do.
3457	Sept. 1	48 28 20	124 52 05	54	44.2	142	gy. s	Do.
3458	Sept. 2	48 21 50	124 24 00	51		115	dk. s. st	Do.
3459	Sept. 2	48 24 20	124 24 40	53	44.5	123	gy. s. p	Do.
3460	Sept. 2	48 25 05	124 10 00	53	46.8	53	gy. s	Do.
3461	Sept. 2	48 17 20	124 07 25	54	44.4	114	gy. s. g. rks	Do.
3462	Sept. 3	48 15 00	123 35 50	53	44.8	92	dk. s. rky	Do.
3463	Sept. 4	48 09 30	123 23 30	52	47.8	45	gy. s	Do.
3464	Sept. 4	48 14 00	123 20 40	55	47.8	40	gy. s. p	Do.
3465	Sept. 4	48 21 00	123 14 00	55	49.9	48	rky	Do.
3466	Sept. 4	48 18 30	123 22 00	53	48.5	56	gy. s. sh. rky	Do.
		Hawaiian Islands.						
3467	Dec. 3	21 13 00	157 43 37	76		310	fne. wh. s. bk. sp	S. B. T.
3468	Dec. 3	21 15 36	157 41 10	76		17	s. co	Tangles.
3469	Dec. 3	21 14 51	157 43 30	76		14	s. co	Do.
3470	Dec. 4	21 08 30	157 49 00	76	43.3	343	wh. s	L. B. T.
3471	Dec. 4	21 10 30	157 48 30	76		337	fne. wh. s	Do.
3472	Dec. 4	21 12 00	157 49 00	78		295	fne. wh. s	Do.
3473	Dec. 6	21 15 00	157 30 00	76	43.8	313	fne. gy. s	Do.
3474	Dec. 6	21 12 00	157 38 30	77		375	fne. wh. s	Do.
3475	Dec. 6	21 08 00	157 43 00	76		351	fne. wh. s	Do.
3476	Dec. 6	21 09 00	157 53 00	76		298	fne. wh. s	Do.

a Three trials submarine tow net.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Off San Francisco, Cal.						
	1893.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
3477	Apr. 26	36 50 00	121 59 45	51	46.5	80	rky	L. B. T.
3478	Apr. 26	36 44 45	120 57 00	53	------	68	gy. s. m	L. B. T., surf.
3479	Apr. 27	37 28 00	123 00 00	50	------	276	gn. m. fne. s	L. B. T.
		Bering Sea.						
3480	July 8	52 06 00	171 45 00	47	------	283	bk. s. co. rky	Do.
3481	July 8	52 15 00	171 40 00	48	------	248	bk. s. g	L. B. T., swabs.
3482	July 12	57 18 00	170 42 00	42	38.9	42	gn. m. fne. s	S. B. T., swabs.
3483	July 12	57 18 00	171 18 00	42	36.8	56	gn. m	Do.
3484	July 12	57 18 00	171 54 00	44	37.4	60	bu. m	L. B. T., mud bag.
3485	July 12	57 18 00	172 34 00	44	37.1	62	gn. m	L. B. T.
3486	July 13	57 19 00	173 53 00	43	38	150	gn. m. fne. s	L. B. T., mud bag.
3487	July 13	57 10 00	173 45 00	43	37.6	81	gn. m. fne. s	Do.
3488	July 13	57 05 00	173 47 00	45	37.3	106	gn. m. gy. s	Do.
3489	July 13	57 00 00	173 14 00	46	38.5	184	gn. m. gy. s	Do.
3490	July 13	56 47 00	173 14 00	46	38	78	gn. m. fne. s	Do.
3491	July 14	56 32 00	172 28 00	44	------	103	gn. m. fne. gy. s	Do.
3492	July 14	56 32 00	171 50 00	45	37.8	70	gn. m. fne. s	Do.
3493	July 14	56 33 00	171 20 00	46	38.5	67	gn. m. fne. s	Do.
3494	July 14	56 34 00	170 34 00	46	38.5	65	gn. m. fne. s	L. B. T.
3495	July 14	56 37 00	170 01 00	45	38.5	56	gn. m. fne. s	Do.
3496	July 17	56 32 00	169 45 00	42	39.9	41	gy. s. st. gn. m	L. B. T., mud bag
3497	July 17	56 18 00	169 38 00	42	38.7	86	gy. s. bk. sp	Do.
3498	July 17	56 13 00	169 36 00	45	38.6	142	fne. gy. s. g	Do.
3499	July 17	56 12 00	169 35 00	46	38.5	162	fne. gy. s. g	L. B. T.
3500	July 17	56 02 00	169 30 00	46	38.6	121	fne. gy. s. g	L. B. T., surf.
3501	July 17	55 51 00	169 18 00	47	36.9	688	gn. m	Do.
3502	July 17	55 38 00	169 00 00	46	------	368	gn. m. dk. s	Do.
3503	July 28	57 06 15	170 11 00	43	37.9	17	gn. m. fn. s	S. B. T.
3504	July 28	56 57 00	169 27 00	45	37.8	34	fne. gy. s. bk. sp	L. B. T.
3505	July 28	57 09 00	168 17 00	44	38.1	44	fne. gy. s	Do.
3506	July 29	57 33 00	165 55 00	42	32	36	gy. s. m	Do.
3507	July 29	57 43 00	164 42 00	43	37.5	31	fne. gy. s	L. B. T., surf.
3508	July 29	58 33 00	164 49 00	41	42	23	fne. gy. s. sh	Do.
3509	July 31	57 00 00	169 43 00	43	40.8	35	fne. gy. s. sh	R. D.
3510	Aug. 1	57 12 30	169 51 00	43	40.1	27	sh. bk. s	L. B. T.
3511	Aug. 1	57 32 00	169 38 00	44	37.2	39	fne. s. dk. m	Do.
3512	Aug. 1	57 49 30	169 27 00	45	36.6	38	fne. s. gn. m	R. D.
3513	Aug. 1	58 27 00	169 01 00	43	------	35	fne. s. gn. m	L. B. T., mud bag.
3514	Aug. 2	59 22 00	168 21 00	40	40.8	21	fne. gy. s	L. B. T.
3515	Aug. 2	59 59 00	167 53 00	42	41.8	13	fne. gy. s	L. B. T., mud bag.
3516	Aug. 2	60 28 00	168 08 00	44	43.2	17	fne. gy. s	L. B. T.
3517	Aug. 2	60 27 00	169 04 00	41	40.3	24	fne. gy. s	L. B. T., surf.
3518	Aug. 3	60 22 00	171 42 00	42	33.9	36	gn. m	Do.
3519	Aug. 3	60 06 00	171 25 00	42	31.1	37	bk. m. fne. s	Do.
3520	Aug. 3	59 28 00	170 57 00	43	32.2	38	gn. m. fne. s	L. B. T., mud bag, surf
3521	Aug. 3	59 09 00	170 48 00	43	31.9	40	gn. m. fne. s	L. B. T., surf. tow net.
3522	Aug. 4	57 58 00	170 09 00	44	35.7	41	crs. gy. s. g	L. B. T., mud bag, surf.
3523	Aug. 4	57 39 00	170 02 00	45	38	39	gn. m. fne. s	L. B. T., surf.
3524	Aug. 4	57 24 00	169 56 00	45	40.3	36	gy. s. p	Do.
3525	Aug. 4	57 21 00	170 05 00	45	41.6	29	bk. s. sh	R. D.
3526	Aug. 5	57 31 00	170 57 00	44	38.9	49	dk. m. fne. s	Do.
3527	Aug. 5	57 48 00	171 21 00	44	38	52	gn. m	L. B. T., surf.
3528	Aug. 5	58 19 30	172 02 00	45	35.9	55	dk. gn. m. fne. s	L. B. T.
3529	Aug. 5	58 36 00	172 24 00	45	36.1	56	gn. m	Do.
3530	Aug. 6	59 39 00	173 53 00	44	34.9	59	dk. gn. m. fne. s	L. B. T., surf.
3531	Aug. 6	59 55 00	174 17 00	46	35.1	59	gn. m	Do.
3532	Aug. 6	59 12 00	175 39 00	44	34.8	77	dk. gn. m. fne. s	Do.
3533	Aug. 7	57 34 00	173 33 00	46	39.2	70	gy. s. bk. sp	L. B. T.
3534	Aug. 8	57 03 00	171 19 00	45	38.1	59	gn. m	Do.
3535	Aug. 8	57 02 00	170 46 00	45	39	52	gn. m. fne. s	Do.
3536	Aug. 8	57 05 00	170 35 00	45	42.4	40	gn. m. fne. s	Do.
3537	Aug. 9	54 45 00	169 06 00	43	38	49	fne. gy. s	L. B. T., surf.
3538	Aug. 9	56 41 00	168 29 00	46	38	59	gn. m. s	Do.
3539	Aug. 9	56 34 00	167 19 00	45	38.9	57	gn. m. s	L. B. T., mud bag, surf.
3540	Aug. 9	56 27 00	166 08 00	45	36	51	gn. m. fne. s	L. B. T., surf.
3541	Aug. 10	56 14 00	164 08 00	46	36.1	49	bk. m. fne. s	L. B. T., mud bag, surf.
3542	Aug. 10	56 10 00	163 26 00	47	39.2	49	dk. m. fne. s	L. B. T., surf.
3543	Aug. 18	56 41 00	169 39 00	44	42.7	43	bk. s. sh	Do.
3544	Aug. 18	56 50 00	169 59 00	44	41.1	41	fne. gy. s. sh	Do.
3545	Aug. 21	56 15 00	171 33 00	48	36	1,020	gn. m. fne. s. c	Agassiz dredge, surf.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Bering Sea.						
	1893.	° ′ ″	° ′ ″	° *F.*	° *F.*	*Fms.*		
3546	Aug. 31	54 12 00	165 42 00	47	45.6	36	g. bk. s	L. B. T., mud bag.
3547	Aug. 31	54 16 00	165 45 00	47	45	51	fne. bk. s	L. B. T., surf.
3548	Sept. 1	54 44 00	165 42 00	47	39.5	91	bk. s	Do.
3549	Sept. 1	55 00 00	166 10 00	49	40.1	78	fne. bk. s	Do.
3550	Sept. 1	55 24 00	167 02 00	48	39	76	br. m	Do.
3551	Sept. 1	55 36 00	167 28 00	47	39.1	74	gn. m	Do.
3552	Sept. 2	56 28 00	169 28 00	47	39.8	54	bk. s. rky	L. B. T.
3553	Sept. 2	56 28 00	169 46 00	48	39.5	51	fne. gy. s. m	L. B. T., surf.
3554	Sept. 2	56 34 00	170 19 00	47	39.5	62	gn. m	Do.
3555	Sept. 2	56 45 00	170 18 00	46	40.2	57	gn. m	Do.
3556	Sept. 2	56 57 30	170 33 00	46	41	49	gn. m. fne. s	Do.
3557	Sept. 2	57 04 00	170 24 00	45	45	26	s. bk. sp	L. B. T.
3558	Sept. 3	56 58 00	170 09 00	45	42.9	25	s. dk. sp. rky	Do.
3559	Sept. 3	56 56 00	169 52 00	46	42.5	39	gy. s. brk. sh	L. B. T., mud bag, surf.
3560	Sept. 3	56 40 00	169 20 00	45	40.7	43	fne. gy. s. bk. sp	L. B. T.
3561	Sept. 3	56 31 00	169 17 00	45	40.7	48	gy. s. bk. sp	Do.
	1894.	*San Diego Bay.*						
3562	Mar. 19	San Diego Bay, Cal. *a*		58		7	s. bk. sh	Boat dredge.
3563	Mar. 19	do		56		6.5	fne. s. bk. sh	Do.
3564	Mar. 19	do		58		5	fne. s. m. bk. sh	Do.
3565	Mar. 19	do		58		4.5	fne. s. m. bk. sh	Do.
3566	Mar. 19	do		58		3	fne. s. bk. sh	Do.
3567	Mar. 21	do		57		3	fne. s. bk. sh	Do.
3568	Mar. 21	do		57		4	hrd. bk. sh	Do.
3569	Mar. 21	do		57		6	fne. s. bk. sh	Do.
3570	Mar. 21	do		57		2	fne. s. oyster sh	Do.
3571	Mar. 21	do		57		2	hrd	Do.
3572	Mar. 21	do		56		2	m. fne. s	Do.
3573	Mar. 21	do		56		1.5	m. s	Boat beam trawl.
3574	Mar. 21	do		57		5.75	fne. s	Do.
3575	Mar. 21	do		57		6.75	fne. s	Do.
3576	Mar. 21	do		58		5	fne. s. bk. sh	Do.
3577	Mar. 21	do		57		6	fne. s. bk. sh	Do.
3578	Mar. 21	do		56		6	fne. s. bk. sh	Do.
3579	Mar. 22	do		53		9	hrd	Do.
3580	Mar. 22	do		53		7	hrd	Do.
3581	Mar 22	do		53		12	fne. s. r	Do.
3582	Mar. 22	do		54		6.75	fne. s. r	Do.
3583	Mar. 22	do		53		4	fne. s. r	Do.
3584	Mar. 22	do		54		8	fne. s. r	Do.
3585	Mar. 24	do		57		4	fne. gy. s	Do.
3586	Mar. 24	do		57		4	fne. gy. s	Do.
3587	Mar. 24	do		57		3	fne. gy. s	Do.
3588	Mar. 24	do		57		2.5	r. oyster sh	Do.
3589	Mar. 24	do		57		3	r. oyster sh	Do.
3590	Mar. 24	do		57		3.5	r. bk. sh	Do.
3591	Mar. 24	do		57		4.5	r. bk. sh	Do.
		Off Washington.						
3592	Apr. 30	48 10 00	122 45 30	46		27	r. s	S. B. T.
3593	Apr. 30	48 11 30	122 48 00	46	46	37	rky	Ship's dredge.
3594	Apr. 30	48 12 00	122 50 00	46	46	36	s. p	Tangles.
3595	Apr. 30	48 13 00	122 59 30	46	45	49	rky. g. s	Do.
3596	Apr. 30	48 14 30	122 58 00	46	44	81	bu. m	L. B. T.
3597	Apr. 30	48 15 00	123 00 00	46	45	67	crs. bk. s	Do.
		Bering Sea.						
			Long. E.					
3598	June 8	52 01 00	177 34 00	40		34	bk. g	L. B. T.
3599	June 9	52 05 00	177 40 00	42		55	rky. fne. s. sh	Do.
			Long. W.					
3600	June 26	55 06 00	163 28 00	41	40	9	fne. dk. vol. s	L. B. T., surf.
	1895.							
3601	Aug. 5	55 06 00	169 08 00	46	35.8	1,044	gn. m. fne. s	L. T. B., surface and intermediate nets.
3602	Aug. 10	56 32 00	172 40 00	44	37.1	81	gn. m. s	L. B. T., surface net.
3603	Aug. 11	55 23 00	170 31 00	45	35.1	1,771	bn. oz	L. B. T., surface and intermediate nets.
3604	Aug. 12	54 54 00	168 59 00	45	35.2	1,401	gn. oz	Do.
3605	Aug. 13	55 17 00	167 34 00	44	37.1	91	gn. m. s	Do.

a All bearings are magnetic. Chart used, C. S. No. 5106.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Bering Sea.						
	1895.	° ′ ″	° ′ ″	° F.	° F.	Fms.		
3606	Aug. 13	55 27 00	167 47 00	45	38.1	87	gn. m. fne. s	L. B. T., surface and intermediate nets.
3607	Aug. 18	54 11 30	167 25 00	45	35.9	987	gn. m. bk. lav. s	Do.
3608	Aug 20	55 19 00	168 11 00	45	37.8	276	gy. s	Do.
3609	Aug. 21	55 35 00	168 20 00	46	37.9	74	gn. m. s	Do.
3610	Aug. 22	55 58 00	167 16 00	47	36.8	75	gn. m	Do.
3611	Aug. 22	56 45 00	167 25 00	46	34.6	50	gn. m. s	Do.
3612	Sept. 30	Bellingham, Wash.		52		11	gn. m	S. B. T.
	1896.							
3613	Mar. 31	San Diego Bay, Cal.		63		5	m. sh	Boat beam trawl.
3614	Mar. 31	do		63		4.5	m. sh	Do.
3615	Mar. 31	do		63		5	m. sh	Do.
3616	Mar. 31	do		63		5	m. sh	Do.
3617	Mar. 31	do		63		5.5	m. sh	Do.
3618	Mar. 31	do		63		4.5	m. sh	Do.
3619	Mar. 31	do		63		4	m. sh	Do.
3620	Mar. 31	do		63		6	m. sh	Do.
3621	Apr. 1	do		61		6.5	m. s	Do.
3622	Apr. 1	do		61		7	m. s	Do.
3623	Apr. 1	do		63		6.25	s	Do.
3624	Apr. 1	do		63		5	m. s	Do.
3625	Apr. 1	do		63		6	m. s	Do.
3626	Apr. 1	do		63		7	m. s	Do.
		West of Cortez and Tanner banks						
3627	Apr. 13	32 44 00	119 32 00	55	39.2	776	gn. m. s	S. B. T.
						Feet.		
3628	June 1	Lower Bay of San Francisco.		57		18	sft. gn. m	Oyster dredge.
3629	June 1	do		57		19.5	sft. gn. m	Do.
3630	June 1	do		58		15	sft. gn. m	Do.
3631	June 1	do		58		25	gn. m	Do.
3632	June 1	do		60		18	gn. m	Do.
3633	June 1	do		62		18	gn. m	Do.
		Bering Sea.						
3634	July 7	54 51 00	167 27 00	43	36.3	664	w. vol. s	L. B. T. surf.
3635	July 10	Zapadnie Bay.	St. George Island.	43		24	bk. s. sky	L. B. T.
3636	July 18	57 05 40	170 25 00	38	42.2	18	rky	Do.
3637	July 18	57 06 30	170 28 00	38	39.0	32	crs. g	Do.
3638	July 18	57 07 30	170 28 15	38	38.7	33	g	Do.
3639	July 18	57 05 45	170 30 00	38	38.8	27	fne. gy. s	Do.
3640	July 18	57 06 00	170 32 00	38	39.0	26	fne. gy. s	Do.
		Avatcha Bay, Kamchatka.						
			Long. E.					
3641	Aug. 19	52 58 00	158 36 00	45	47.7	16	bk. m	L. B. T.
3642	Aug. 19	52 57 45	158 36 30	47		16	bk. m	Do.
		Southeast coast of Kamchatka.						
3643	Aug. 20	51 16 00	158 03 00	49	31.7	100	bk. s. p	L. B. T.
3644	Aug. 20	51 09 00	157 48 00	51	33.1	96	bk. s	Do.
3645	Aug. 31	To westward of Robben Island, Okhotsk Sea 2 to 10 miles distant. Having no chart, nearer location can not be given.		47		10	s	Do.
3646	Aug. 31			47		18	fne. gy. s	Do.
3647	Aug. 31			47		20	fne. gy. s	Do.
3648	Aug. 31			47		20	fne. gy. s	Do.
3649	Aug. 31			50		25	fne. dk. s	Do.
3650	Aug. 31			50		28	bn. m. s	Do.
3651	Aug. 51			47		20	fne. gy. s	Do.
		Off Shana, Iturup Island.						
3652	Sept. 6	45 15 30	147 53 00	56		14	yl. c	L. B. T.
3653	Sept. 6	45 14 00	147 52 30	57	56.5	18	dk. gy. s	Do.
		Off Japan.						
3654	Sept. 19	Hakodate Bay		67		10.5	gn. m. s	L. B. T.
3655	Sept. 19	do		67		12	gn. m. s	Do.
3656	Sept. 19	do		67		11.5	gn. m. s	Do.
3657	Sept. 19	do		67		13.5	fne. gy. s	Do.
3658	Sept. 19	do		67		22	fne. gy. s	Do.
3659	Sept. 19	do		65		15.5	fne. gy. s	Do.
3660	Sept. 19	do		65		14.5	fne. gy. s	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. E.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
		Off Japan.						
	1896.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
3661	Oct. 13	Off Uki Shima, Gulf of Tokyo.		72	48.0	169	m. p	L. B. T.
		Lat. N.	Long. W.					
		Santa Catalina Island, California.						
	1897.							
3662	Apr. 8	1½″ off Avalon, Dakins Cove.		58	51.7	47	fne. gy. s	L. B. T.
3663	Apr. 8	Near preceding station.		58	52.5	47	fne. gy. s	Do.
3664	Apr. 8	2′ off Avalon, Dakins Cove.		58	49.7	80	fne. gy. s	Do.
3665	Apr. 9	33 17 00	118 24 00	61	.....	59	fne. gy. s	Do.
		Monterey Bay and vicinity.						
3666	Apr. 13	36 45 00	121 53 00	55	.....	68	m. s. bldr	L. B. T.
3667	Apr. 13	36 45 00	121 52 00	55	47.7	90	m. s. bldr	Do.
3668	Apr. 13	36 40 00	121 53 00	56	48.7	39	s. mica	Do.
3669	Apr. 16	36 47 00	122 11 00	57	42.7	278	gn. m. fne. s	Do.
3670	Apr. 17	36 43 00	122 12 00	54	37.8	581	gn. m. s	Do.
3671	Apr. 21	37 00-00	122 20 00	50	.....	56	gn. m. s	Do.
3672	Apr. 24	37 37 00	123 02 00	49	49.0	68	s. co. r	Do.
		Flattery Bank.						
3673	May 14	48 21 45	124 50 30	47	45.0	77	gn. m. s	L. B. T.

a Nos. 3674 to 3680 missing from the record.

Record of dredging and trawling stations of the Albatross (Tropical Pacific).

Numbers. Serial.	Numbers. A. A.	Date.	Position. Lat. N.	Position. Long. W.	Surface temp.	Bottom temp.	Depth.	Kind of bottom.	Instrument used, etc.
			San Francisco to Marquesas.						
		1899.	° ′ ″	° ′ ″	°F.	°F.	Fms.		
3681	2	Aug. 27	28 23 00	126 57 00	66	34.6	2,368	lt. br. vol. oz	8′ Tnr.
3682	10	Sept. 2	16 38 00	136 14 00	79	.....	3,088	no spec	5½′ Blk.
3683	13	Sept. 5	9 57 00	137 47 00	82	.....	2,690	rad. oz	Do.
3684	17	Sept. 10	0 50 00 Lat. S.	137 54 00	80	.....	2,463	gy. yl. glob. oz	Do.
3685	25	Sept. 14	Off Marquesas Islands.		80	38.0	830	vol. s. glob	8′ Tnr.
3686	31	Sept. 19	12 20 00	144 15 00	79	35.0	2,700	red. c	5½′ Blk.
3687	74	Oct. 5	Off Pt. Venus, Tahiti Island, S. 82°, E. 4.8 m.		79	.....	725	ful. vol. s. yl. m	8′ Tnr.
			Paumotu Islands.						
3688	133	Oct. 28	N. W. Pt. Marokau, East 2 m.		78	34.5	742	pter. oz. mang	8′ Tnr.
3689	134	Oct. 28	N. W. Pt. Marokau, N. 40°, E. 4 m.		79	37.6	807	co. s. mang	Tangles.
3690	139	Oct. 29	N. W. Face Hao Atoll, East 2 m.		79	37.6	812	co. s	5½′ Blk.
3691	173	Nov. 4	18 55 00	146 32 00	78	34.8	2,440	vol. m. glob. co. part.	Do.
			Tonga to Ellice Isds.						
3692	183	Nov. 24	19 04 00	167 41 00	80	33.9	2,472	rd. c. rad. oz	Do.
3693	185	Nov. 27	21 18 00 Long. E.	173 31 00	77	.....	4,173	no spec	4′ Blk.
3694	194	Dec. 21	12 43 00 Lat. N.	179 50 00	85	35.6	1,445	glob. oz	8′ Tnr.
			Off Honshu Island, Japan.						
		1900.							
3695	.....	May 4	Tsuragi Saki Light, S. 80°, W. 4.3 m.		64	.....	259; 110	gn. m. fne. s	8′ Tnr.
3696	.....	May 5	Manazuru Zaki, N. 70°, W. 4.7 m.		65	39.0	501; 749	gn. m. vol. a. s	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position.	Surface temp.	Depth.	Kind of bottom.	Instrument used, etc.
	1900.	*Off Honshu Island, Japan*	° *F.*	*Fms.*		
3697	May 5	Manazuru Zaki, 26°, W. 6.0 m.	65	265; 120	gy. m. vol. s.	8′ Tnr.
3698	May 5	Manazuru Zaki, N. 8°, W. 4.5 m.	65	153	gn. m. vol. a. s.	Do.
3699	May 6	Entr. Port Arari, S. 74°, E. 5.6 m.	60	726; 400	gy. m. vol. part	Do.
3700	May 7	Seno Umi, N. 4°, E. 2 m	63	63	vol. m. s	Grapnels, tangles.
3701	May 7	Seno Umi, N. 10°, W. 2.3 m	64	73; 41		5½′ Blk.
3702	May 7	Seno Umi, N. 13°, W. 1.5 m	64	41; 31	vol. m. s. r.	Grapnel swab.
3703	May 7	Seno Umi, N. 16°, E. ⅝ m	64	31	vol. s. g.	5½′ Blk.
3704	May 7	Seno Umi, S. 30°, E. 1.1 m	64	94; 150	fne. vol. s.	Do.
3705	May 7	Seno Umi S. 18°, W. 5.3 m	64	Did not sound.		Surf.
3706	May 8	Entr. Port Heda, N. 86°, E. 2 m.	64	337	gn. vol. m	8′ Tnr.
3707	May 8	Ose Zaki, S. 53°, W. 2¼ m	65	63; 75; 70	vol. s. a. g.	Do.
3708	May 8	Ose Zaki, S. 55°, W. 2.25 m	65	60; 70	gn. m. vol. s. a.	Do.
3709	May 10	Spithead Shimizu Harbor, N. 77°, W. 1.5 m.	63	173; 260	stf. bl. vol. m. r.	5½′ Blk.
3710	May 10	Entr. Port Heda, N. 88°, E. 6.5 m.	62	800; 677	vol. m. s.	Do.
3711	May 10	Entr. Port Heda, S. 63°, E. 6.2 m.	64	677; 500	vol. m. s.	Do.
3712	May 10	Ose Zaki, S. 72°, E. 6.5 m	64	500; 600	vol. m. s.	Surf.
3713	May 11	Ose Zaki, S. 81°, W. 4.2 m	65	45; 48	vol. s. sh. r.	8′ Tnr.
3714	May 11	Ose Zaki, S. 82°, W. 3.3 m	65	48; 60	vol. s. sh. r.	Do.
3715	May 11	Ose Zaki, S. 56°, W. 1.6 m	65	68; 65	vol. s. sh. r.	8′ Tnr.
3716	May 11	Ose Zaki, S. 36°, W. 0.8 m	66	65; 125	vol. s. sh, r.	Do.
3717	May 11	Ose Zaki, S. 34°, E. 0.8 m	66	75; 100; 63	vol. s. sh. r.	Do.
3718	May 11	Ose Zaki, S. 37°, W. 1.2 m	65	65	vol. s. sh. r.	5½′ Blk.
3719	May 11	Ose Zaki, S. 13°, W. 1.5 m	66	90; 70	vol. s. sh. r.	8′ Tnr.
3720	May 11	Ose Zaki, S. 36°, W. 0.8 m	66	63	vol. s. sh.	Do.
3721	May 12	Oi Gawa, N. 49°, W. 2.8 m	64	207; 250	gy. m.	Do.
3722	May 15	Yokkaichi Lt., S. 89°, W. 3.7 m.	63	9	m. s. p. sh.	Do.
3723	May 15	Yokkaichi Lt., N. 23°, W. 6.7 m.	62	13; 16	m. s. p. sh.	Do.
3724	May 15	Noma Saki, S. 86°, E. 5.7 m	64	20	m. s. p. sh.	Do.
3725	May 15	Noma Saki, N. 18°, E. 8.8 m.	64	13	s. sh. g.	Do.
3726	May 15	Takamatsu Zaki, N. 5°, W. 5.7 m.	63	26	gy. vol. s	Do.
3727	May 16	Omai Zaki Lt., N. 17°, E. 9.7 m.	62	34	m. crs. s. blk. sh	Do.
3728	May 16	Omai Zaki Lt., N. 17°, E. 11.25 m.	64	34	m. stf. c	Do.
3729	May 16	Omai Zaki Lt., N. 17°, E. 12.7 m.	64	34	m. g	Do.
3730	May 16	Omai Zaki Lt., N. 17°, E. 14.5 m.	64	34; 37	m. g. r.	Surf.
3731	May 16	Omai Zaki Lt., N. 17°, E. 16.25 m.	64	37	crs. s. brk. sh. r.	8′ Tnr.
3732	May 16	Omai Zaki Lt., N. 17°, E. 16.5 m.	65	41	crs. s. brk. sh. r.	5½′ Blk.
3733	May 16	Omai Zaki Lt., N. 24°, E. 9.5 m.	64	49	fne. gy. vol. s.	8′ Tnr.
3734	May 16	Omai Zaki Lt., N. 25°, E. 11 m.	64	48; 36	crs. gy. vol. s. brk. sh.	Do.
3735	May 16	Omai Zaki Lt., N. 15°, E. 11.4 m,	65	36	crs. gy. vol. s. brk. sh.	Do.
3736	May 17	Ose Zaki, S. 83°, E. 8.1 m	64	599; 480	stf. bl. m. st	Do.
3737	May 17	Ent. Port Heda, N. 49°, E. 1.9 m.	65	161; 167	gn. m. vol. s	Tangles.
3738	May 17	Ent. Port Heda, N. 84°, E. 1.2 m.	67	167	stf. bl. m	8′ Tnr.
3739	May 17	Ose Zaki, S. 25°, W. 0.25 m	65	55; 65	vol. s. sh. r	Tangle bar.
3740	May 17	Ose Zaki, S. 50°, W. 0.83 m	65	65	vol. s. sh. p	Do.
3741	May 17	Ose Zaki, S. 29°, W. 0.75 m	66	68; 63	vol. s. sh. p	8′ Tnr.
3742	May 19	Suno Saki, N. 89°, E. 9.8 m	64	88; 57	gy. yl. s.	5½′ Blk.
3743	May 19	Suno Saki, N. 88°, E. 9.25 m.	64	57; 46	gy. yl. s.	Tangle bar.
3744	May 19	Suno Saki, E. 8.83 m	64	46	fne. yl. g	Do.
3745	May 19	Suno Saki, N. 89°, E. 8.75 m.	64	46; 49	gy. s. g	Do.
3746	May 19	Suno Saki, N. 87°, E. 8.5 m.	64	49	gy. s. p	Tangles.
3747	May 19	Suno Saki, N. 88°, E. 7.9 m.	64	48; 45	co. g.	Hand lines.
3748	May 19	Suno Saki, S. 88°, E. 8.8 m.	64	73; 200	yl. s. rot. co.	Tangles.
3749	May 19	Suno Saki, S. 85°, E. 9.4 m.	64	158; 83	bk. s. sh	Do.

Record of dredging and trawling stations of the Albatross—Continued.

Serial No.	Date.	Position.	Surface temp.	Depth.	Kind of bottom.	Instrument used, etc.
	1900.	*Off Honshu Island, Japan*	° F.	*Fms.*		
3750	May 19	Suno Saki, S. 89°, E. 9.25 m.	65	83; 140	gy. s. brk, sh. p	4′ Blk.
3751	May 19	Suno Saki, S. 87°, E. 8.5 m.	65	148; 140	gn. m. vol. s	Do.
3752	May 19	Suno Saki, S. 71°, E. 3.25 m.	66	58; 100; 54	gy. s. g	Tangles.
3753	May 19	Suno Saki, S. 58°, E. 3.6 m.	66	54; 48	gn. m. s. g	Tangle bar.
3754	May 19	Suno Saki, S. 69°, E. 3.2 m.	67	48; 52	gy. s	8′ Tnr.
3755	May 19	Suno Saki, S. 63°, E. 3.6 m.	66	52; 77	gy. s. co	Do.
3756	May 19	Suno Saki, S. 60°, E. 3 m.	66	77; 50	rot. co	Do.
3757	May 19	Suno Saki, S. 64°, E. 2.5 m.	65	50; 41	crs. co. s. g	Do.
3758	May 22	Suno Saki, S. 55°, E. 2.1 m.	65	73; 52	bl. c. r	Do.
3759	May 22	Suno Saki, S. 53°, E. 2.3 m.	66	52; 60	gy. s. fne. g. brk. sh. r	Do.
3760	May 22	Suno Saki, S. 53°, E. 3 m.	66	83; 50	gy. s. g	Do.
3761	May 22	Suno Saki, S. 55°, E. 2.5 m.	66	35; 42	gy. s. g	Do.
3762	May 22	Suno Saki, S. 59°, E. 2.8 m.	66	42; 49	gy. s. bk. sp. brk. sh	Do.
3763	May 22	Suno Saki, S. 63°, E. 3.3 m.	66	49; 52	gy. s. brk. sh	Do.
3764	May 22	Suno Saki, S. 64°, E. 2.8 m.	66	44; 50	fne. g. brk. sh	Do.
3765	May 22	Suno Saki, S. 51°, W. 2 m.	66	68; 45	gn. m. s	Do.
3766	June 3	Shioya Saki Lt., N. 78°, W. 108 m.	69			Surf.
3767	June 5	Oboro Saki, N. 67°, E. 2.3 m.	67	14; 18	gy. s	8′ Tnr.
3768	June 5	Daikoku Saki, N. 63°, E. 4.25 m.	64	25; 27	lt. gy. s	Do.
3769	June 5	Nagane Saki, N. 55°, E. 5.3 m.	64	40; 42	gn. m. s	Do.
3770	June 5	Nagane Saki, N. 41°, E. 4.7 m.	62	42; 45	gn. m. s	Do.
3771	June 5	Doumiki Saki, N. 19°, W. 4.5 m.	63	61	gn. m. s	Do.
3772	June 5	Kinkwasan Lt., N. 34°, W. 7.5 m.	59	79	gn. m. s	Do.
3773	June 5	Kinkwasan Lt., N. 49°, W. 5.9 m.	61	78	bk. s	Do.
3774	June 5	Kinkwasan Lt., N. 81°, W. 5.4 m.	61	81	gy. s	Do.
3775	June 5	Kinkwasan Lt., N. 15°, E. 3.2 m.	60	57	gn. m. s	Do.
		Off Kamchatka.				
3776	June 21	Avatcha Village, N. 44°, W. 2 m.	48	13	sft. gn. m. sh. stk	8′ Tnr.
3777	June 21	Avatcha Village, N. 7°, W. 3.8 m.	49	13	sft. gn. m. sh. stk	Do.
3778	June 21	N. Ent. Tareinski Hbr., N. 73°, W. 2.1 m.	49	15; 12	gn. m. s. sh. g	Do.
3779	June 21	N. Ent. Tareinski Hbr., N. 16°, E. 1.6 m.	49	12	gn. m. s. sh. g	Do.
3780	June 21	Id. S. shore Tareineki, S. 43°, W. 0.7 m.	49	12	gn. m. s. sh. g	Do.
3781	June 23	Cape Nalacheff, N. 5°, E. 10.75 m.	50	39; 42	gy. s. g	Do.
3782	June 23	Cape Nalacheff, N. 5°, W. 10.5 m.	50	42	gy. s. g	Do.
3783	June 25	S. E. Cape, Copper Id., N. NE. ½, E. 40 m., approx.	46	1567	gy. vol. s. gn. m	Do.
		North of Aleutian Islands.				
3784	June 27	Lat. 54° 32′ N., Long. 178° 31′ E.	45	850	gn. m. fne. gy. s	Do.
3785	June 27	Rat Ids., Aleutian Chain, S. 150 m.	45	270	gy. s. brk. sh	Do.
3786	June 27	Lat. 54° 47′ 20″ N., Long. W. 178° 54′ 00″.	46	2106	gy. s. yl. m	Do.

HYDROGRAPHIC RECORDS.

Record of hydrographic soundings of the Albatross during the years 1883–1900.

Serial No.	Date.	Position.		Depth.	Character of bottom.
		Lat. N.	Long. W.		
		Cape Hatteras to Cape May.			
	1883.	° ′ ″	° ′ ″	*Fms.*	
1	May 19	37 11 20	75 15 25	15	gy. s.
2	May 19	37 15 15	75 03 30	18	gy. s.
3	May 19	37 18 21	74 53 54	23	gy. s.
4	May 19	37 21 27	74 44 18	26	gy. s. bk. sp.
5	May 19	37 24 33	74 34 42	34	gy. s. bk. sp.
6	May 19	37 27 39	74 25 06	55	lost lead.
7	May 19	37 30 45	74 15 30	312	br. m. f. s.
8	May 20	37 24 30	74 23 30	358	br. m. f. s.
9	May 20	37 29 15	74 27 00	48	wh. s. bk. sp.
10	May 20	37 34 45	74 28 00	44	gy. s. bk. sp.
11	May 20	37 35 40	74 27 00	38	gy. s. bk. sp.
12	May 20	37 44 25	74 25 30	37	gy. s gr.
13	May 20	37 48 00	74 24 15	37	gy. s. bk. sp.
14	May 20	37 49 48	74 19 46	39	gy. s. bk.
15	May 20	37 51 36	74 15 17	48	s. gr. bk. sp.
16	May 20	37 53 24	74 10 45	56	gy. s. g.
17	May 20	37 55 12	74 06 19	68	bk. s.
18	May 20	37 57 00	74 01 50	74	gy. s. bk. sp.
19	May 20	37 58 05	73 58 20	85	gy. s. bk. sp.
20	May 21	37 53 20	74 03 10	172	gy. m. fne. s.
21	May 21	37 48 33	74 08 00	96	gy. s.
22	May 21	37 43 47	74 12 50	86	gy. s.
23	May 21	37 39 00	74 17 40	68	gy. s. bk. sp.
24	May 21	37 32 42	74 17 00	158	gy. s.
25	May 21	37 40 30	74 03 00	218	bu. m. fne. s.
		Cape May to Nantucket.			
26	May 25	40 05 55	70 28 00	59	no specimen.
27	May 26	39 27 25	72 06 40	802	bu. m. fne. s.
28	May 26	39 29 30	72 09 40	459	bu. m.
29	May 26	39 31 00	72 12 00	364	bu. m.
30	May 26	39 32 00	72 19 10	182	gn. m.
31	May 26	39 32 54	72 17 30	328	bu. m.
32	July 28	37 54 49	68 05 25	2,976	glob. oz.
33	July 31	39 55 00	68 31 00	1,385	glob. oz.
34	July 31	40 02 20	68 50 30	369	crs. s.
35	Sept. 20	40 02 30	70 37 00	90	gn. m.
		Cape Hatteras to West Indies.			
	1884.				
a 36	Jan. 11	33 50 20	71 42 00	2,953	lt. choc. oz.
b 37	Jan. 13	31 15 42	67 39 10	2,787	lt. choc. oz. glob.
38	Jan. 14	28 17 07	66 17 37	2,957	lt. choc. oz. glob.
c 39	Jan. 15	24 35 14	65 13 07	3,006	stf. choc. c.
		Caribbean Sea.			
40	Jan. 17	19 15 00	65 07 00	3,468	glob. oz.
d 41	Jan. 17	18 59 00	65 07 00	1,902	
e 42	Jan. 24	18 09 00	64 58 50	516	co. r.
43	Jan. 24	18 04 30	65 01 10	1,146	co. s. for.
44	Jan. 24	18 00 00	65 04 00	1,975	
45	Jan. 24	17 55 30	65 06 00	2,501	co. s. for.
46	Jan. 24	17 51 00	65 08 05	2,423	fne. co. s. for.
47	Jan. 25	17 46 30	65 10 25	1,482	crs. co. s. brk. sh. for.
48	Jan. 25	17 42 00	65 12 40	978	co. oz. for.
49	Jan. 25	17 37 30	65 15 00	928	oz. for.
50	Jan. 25	17 33 00	65 17 20	949	co. s. for.
51	Jan. 25	17 28 30	65 19 40	1,265	co. oz. lge. pter. sh. for.
52	Jan. 25	17 24 00	65 22 00	1,895	co s. for.
53	Jan. 25	17 29 10	65 23 30	1,356	oz. for.
54	Jan. 25	17 34 20	65 25 00	990	co. s. for.
55	Jan. 25	17 39 30	65 26 30	933	pter. co. s. for.
56	Jan. 25	17 44 15	65 27 50	1,243	pter. co. oz. for.
57	Jan. 25	17 49 06	65 29 00	2,188	oz. for.
58	Jan. 25	17 45 20	65 35 35	1,345	oz. for.
59	Jan. 25	17 42 10	65 39 40	789	oz. for.
60	Jan. 25	17 39 00	65 44 00	578	co. s. for.
61	Jan. 25	17 35 50	65 48 10	1,303	fne. co. s. for.
62	Jan. 25	17 32 40	65 52 20	2,017	pter. co. s. for.
63	Jan. 26	17 15 30	65 36 20	2,690	co. s. sh.
64	Jan. 26	16 52 00	65 19 20	2,543	fne. co. s. sh.
65	Jan. 26	16 42 02	65 02 20	2,312	fne. co. s. sh. for.
66	Jan. 26	16 28 00	64 42 30	2,192	co. s. for.
67	Jan. 26	16 13 45	64 22 30	2,069	co. s. for. sh.

a Near Ashton Shoal. *b* Near Perseveranza Shoal. *c* Near Mourand Shoal.
d Parted wire at 10 fathoms. Light westerly current.
e St. Thomas light NNE. ¼ E. (mag.). Sail rock NW. ¾ N. (mag.). Slight SW. set.

THE ALBATROSS, WITH SOUNDING APPARATUS READY FOR USE.

Record of hydrographic soundings of the Albatross, etc.—**Continued.**

Serial No.	Date.	Position.		Depth.	Character of bottom.
		Lat. N.	Long. W.		
		Caribbean Sea.			
	1884.	° ′ ″	° ′ ″	*Fms.*	
68	Jan. 27	16 04 15	64 07 00	1,920	yl. oz. for.
69	Jan. 27	15 54 46	63 52 00	1,060	co. s. for.
70	Jan. 27	15 48 00	63 45 20	1,091	co. s. for.
71	Jan. 27	15 44 10	63 42 10	950	brk. co. sh.
a 72	Jan. 27	15 41 00	63 42 00	808	fne. co. s. sh.
b 73	Jan. 27	15 40 18	63 38 36	355	co. brk. sh.
74	Jan. 27	15 38 32	63 37 36	15	co.
75	Jan. 27	15 33 55	63 35 38	172	fne. co. s.
76	Jan. 27	15 29 18	63 33 40	367	fne. co. s.
77	Jan. 27	15 08 20	63 26 00	776	co. s. for.
78	Jan. 27	14 44 25	63 18 00	871	fne. co. s. sh.
79	Jan. 27	14 20 30	63 10 00	821	co. s. sh. for.
80	Jan. 28	13 56 35	63 02 00	684	gy. m. for.
81	Jan. 28	13 34 35	62 51 20	815	m. for.
82	Jan. 28	13 29 00	62 42 40	1,051	for. m. bk. sp.
83	Jan. 28	13 23 00	62 34 15	1,686	for. m. bk. sp.
84	Jan. 28	13 15 00	62 39 00	1,640	for. m. bk. sp.
85	Jan. 28	13 07 10	62 43 40	1,634	for. m. bk. sp.
86	Jan. 28	12 58 40	62 48 00	1,635	bu. m. for. bk. sp.
87	Jan. 29	12 50 40	62 53 00	1,642	m. bk. sp. for.
88	Jan. 29	12 29 00	62 38 30	1,630	m. bk. sp. for.
89	Jan. 29	12 07 30	62 24 00	1,552	bu. m. for.
90	Jan. 29	12 03 00	62 22 20	1,437	bu. m.
91	Jan. 29	11 58 00	62 20 50	1,121	gy. bu. m.
92	Jan. 29	11 53 19	62 19 10	1,247	gy. m.
93	Jan. 29	11 42 40	62 17 00	828	hrd.
94	Jan. 29	11 34 20	62 15 40	441	gy. m. fne. s.
95	Jan. 29	11 27 00	62 13 00	280	bk. m.
96	Jan. 29	11 19 40	62 10 00	70½	crs. g. brk. sh.
97	Jan. 30	11 12 20	62 07 10	63	dk. m. crs. s.
98	Jan. 30	11 05 00	62 04 30	83	bu. m.
c 99	Jan. 30	10 44 45	61 48 18	150	m. s.
d 100	Jan. 30	10 43 45	61 48 50	141	bu. m.
101	Feb. 3	10 54 00	61 58 40	61	sft. bu. m.
102	Feb. 3	11 02 30	62 06 00	57	sft. bu. m.
103	Feb. 3	11 19 00	62 22 00	46	brk. sh.
104	Feb. 3	11 34 20	62 38 15	178	bu. m.
105	Feb. 3	11 45 30	63 01 00	387	bu. m.
106	Feb. 3	11 59 00	63 27 40	919	rky.
107	Feb. 4	12 09 00	63 57 20	1,256	gy. m. fne. s.
108	Feb. 4	12 17 30	64 14 30	2,020	
109	Feb. 4	12 22 50	64 38 00	2,371	gy. oz.
110	Feb. 4	12 41 00	64 23 00	1,528	br. gy. m.
111	Feb. 4	12 59 20	64 08 00	1,714	gy. m.
112	Feb. 4	13 15 30	63 52 10	1,463	br. oz. for.
113	Feb. 5	13 32 00	63 36 30	680	gy. oz. for.
114	Feb. 5	13 48 50	63 20 00	652	br. oz. bk. sp.
115	Feb. 5	14 07 10	63 37 55	852	yl. m. fne. s.
116	Feb. 5	14 21 44	63 58 45	1,615	gy. m. for.
117	Feb. 5	14 35 10	64 21 10	1,843	gy. m. for.
118	Feb. 5	14 51 00	64 42 00	2,115	for. oz.
119	Feb. 6	15 26 00	65 19 20	2,461	lt. gy. m. for.
120	Feb. 6	16 01 00	65 56 20	2,492	gy. m. for.
121	Feb. 6	16 36 20	66 41 00	2,501	choc. glob. oz.
122	Feb. 7	16 35 20	68 00 30	2,458	choc. oz. for.
123	Feb. 7	15 49 00	67 36 40	2,616	choc. oz. for.
124	Feb. 7	15 02 00	67 13 30	2,747	choc. oz. for.
125	Feb. 8	14 20 30	66 54 00	2,804	choc. m. co.
126	Feb. 8	13 40 00	66 35 00	2,814	br. m. co.
127	Feb. 8	13 25 04	66 25 00	2,844	br. m. co.
128	Feb. 8	12 54 40	66 11 10	2,768	dk. choc. oz.
129	Feb. 8	12 35 20	66 14 00	2,820	dk. clayey oz
130	Feb. 9	12 10 30	66 11 00	2,707	dk. clayey oz
e 131	Feb. 9	12 04 00	66 16 40	1,806	choc. oz. for.
f 132	Feb. 9	11 49 00	66 16 50	774	gy. s. brk. sh.
133	Feb. 9	11 33 20	66 19 00	533	gy. m. for.
134	Feb. 9	11 18 50	66 24 20	656	
135	Feb. 9	11 05 00	66 30 00	239	gn. m. s.
136	Feb. 9	10 51 00	66 35 00	150	bu. m. fne. s.
g 137	Feb. 9	10 42 30	66 48 20	135	gn. m. fne. s.
138	Feb. 9	10 51 30	67 01 40	164	gy. s. brk. sh
139	Feb. 9	11 01 00	67 14 15	605	gy. m
140	Feb. 9	11 09 40	67 27 00	947	gy. m.

a House on Aves Islet E. (mag.) 4½ m.
b House on Aves Islet NE. by E. (mag.) 1.3 m.
c S. end Chacachacare Island SSE. ⅝ E. (mag.). Cariaquita Point SW. ¼ W. (mag.).
d E. end Goose Island SSW. (mag.). E. end Islette WNW. (mag.).
e El Roque light on horizon from a height of 25 feet. Bearing WNW. ½ W. (mag.).
f Astronomical position; Orchilla Island distant 6 miles; principal peak E. ¼ N. (mag.).
g Line of bearing of sun, and bearing and distance of Punta Anare.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Depth.	Character of bottom.
		Lat. N.	Long. W.		
		Caribbean Sea.			
	1884.	° ′ ″	° ′ ″	*Fms.*	
141	Feb. 10	11 19 50	67 40 00	1,040	lt. choc. m.
142	Feb. 10	11 28 10	67 53 00	1,021	gy. m.
143	Feb. 10	11 37 30	68 06 30	1,030	lt. gy. c.
144	Feb. 10	11 46 40	68 19 50	980	gy. m.
145	Feb. 10	11 52 00	68 35 40	630	wh. s. r.
a 146	Feb. 10	11 55 20	68 46 00	641	yl. m. fne. s.
147	Feb. 10	11 59 00	68 49 00	507	gy. m.
b 148	Feb. 10	12 05 52	68 55 00	74	crs. s.
149	Feb. 18	12 01 20	68 55 30	410	yl. m. s.
150	Feb. 18	11 56 00	68 56 00	733	yl. m. s.
151	Feb. 18	11 50 45	68 56 30	738	yl. m. s.
152	Feb. 18	11 40 25	68 57 30	321	lt. gn. m. grit.
153	Feb. 18	11 35 10	68 58 00	138	gn. m.
c 154	Feb. 18	11 30 00	68 58 30	45	lt. br. m.
155	Feb. 18	11 51 00	69 18 00	458	bu. m. fne. s.
156	Feb. 18	11 58 30	69 26 20	455	lt. gn. m. grit.
157	Feb. 18	12 06 00	69 34 40	305	gn. m. crs. s.
158	Feb. 18	12 13 30	69 43 00	299	gn. m. grit.
d 159	Feb. 19	12 23 30	69 48 00	420	gy. m.
160	Feb. 19	12 32 50	69 50 00	634	gy. m.
161	Feb. 19	12 54 30	69 55 00	797	yl. m. crs. s. for.
162	Feb. 19	13 40 20	70 10 45	2,694	dk. br. m.
163	Feb. 19	14 24 00	70 28 20	2,360	lt. br. m. s.
164	Feb. 20	15 09 20	70 46 50	2,338	lt. br. m. crs. s. for.
165	Feb. 20	15 55 00	71 03 00	2,209	lt. br. m. for.
166	Feb. 20	16 42 00	71 18 00	2,028	lt. br. m. for.
167	Feb. 21	17 17 30	71 35 00	522	lt. br. m. for.
168	Feb. 21	17 26 00	71 44 45	302	wh. co. s. brk. sh.
169	Feb. 21	17 36 30	72 00 00	2,410	wh. s. brk. sh.
170	Feb. 21	17 48 00	72 12 20	2,434	
171	Feb. 21	18 01 30	72 23 00	1,929	gy. m. bk. s. brk. co. sh.
172	Feb. 21	18 07 00	72 29 00	1,538	brk. co. s.
e 173	Feb. 21	18 10 30	72 32 30	253	bu. m.
174	Feb. 21	18 01 00	72 34 00	1,903	gy. m. bk. s. brk. co. sh.
175	Feb. 21	17 44 00	72 35 00	1,594	lt. br. m. for.
176	Feb. 22	17 28 00	72 36 30	1,946	yl. m. s. for.
177	Feb. 22	17 12 45	72 38 00	2,391	br. m. for.
178	Feb. 22	17 24 45	72 47 00	2,393	br. oz. for.
179	Feb. 22	17 36 30	72 56 00	2,423	br. m. for.
180	Feb. 22	17 45 30	73 04 00	2,391	br. oz. for.
181	Feb. 22	17 39 30	73 22 15	2,490	br. oz. for.
182	Feb. 22	17 48 00	73 34 15	2,369	br. oz. for.
183	Feb. 22	17 54 00	73 48 15	1,039	gy. m. fne. s. for.
184	Feb. 23	17 53 30	73 59 30	1,970	gy. m. s. for.
185	Feb. 23	17 53 15	74 11 00	1,672	gy. m. fne. s. for.
186	Feb. 23	17 53 00	74 22 30	1,206	gy. m. fne. s. for.
187	Feb. 23	18 01 00	74 31 45	894	s. m. sh. for.
188	Feb. 23	17 51 40	74 36 30	894	yl. m. sh. for.
189	Feb. 23	17 42 30	74 40 00	803	br. m. for.
190	Feb. 23	17 33 30	74 45 00	955	yl. m. s. bk. sp.
191	Feb. 23	17 23 15	74 51 30	1,146	gy. m. s. for.
192	Feb. 23	17 13 15	74 57 45	1,122	gy. m. s. for.
193	Feb. 23	17 26 30	75 06 45	968	yl. m. fne. s.
194	Feb. 24	18 02 00	74 57 30	1,510	yl. m.
195	Feb. 24	18 18 30	74 53 30	262	hrd.
196	Feb. 24	18 34 00	74 50 00	1,040	gy. s.
197	Feb. 24	18 45 00	74 32 40	1,347	yl. m.
198	Feb. 24	18 50 00	74 12 00	1,537	yl. m.
199	Feb. 24	18 56 00	73 51 00	1,974	dk. m.
200	Feb. 24	18 59 40	73 30 00	342	hrd.
201	Feb. 24	19 19 40	73 27 00	800	yl. m. sh. for.
202	Feb. 25	19 16 30	73 47 30	502	yl. m. s. sh. for.
203	Feb. 25	19 24 30	74 05 15	700	yl. m.
204	Feb. 25	19 32 30	74 23 00	1,908	yl. m. brk. sh. for.
205	Feb. 25	19 40 00	74 42 00	1,923	gy. m. fne. s. for.
f 206	Feb. 25	19 43 21	75 15 30	1,745	gy. m. s.
g 207	Feb. 25	19 44 45	75 24 15	1,380	gy. m. s. sh.
g 208	Feb. 25	19 46 10	75 33 00	1,380	dk. m. bk. s. sh.
g 209	Feb. 26	19 47 30	75 41 30	1,425	br. m. s. sh.
h 210	Feb. 26	19 49 00	75 50 30	1,175	br. m. s. sh.

a Positions checked by bearing and distance of Little Curaçao light plotted in latitude 11° 58′, longitude 68° 39′.
b Fort Rif light north (mag.) 1,800 feet.
c Astronomical position; Zamuro Point SE. (mag.); 1-knot W. by S. current.
d Light on east end Oruba Island W. ¼ S. (mag.) 8 miles.
e Jacmel NW. ¾ N. (mag.); Jacmel Point W. by S. (mag.).
f E. point Guantanamo Port N. by W. (mag.). Barracas Point WNW. ¼ W. (mag.). Latitude by ✳ Rigel. No current.
g ¼ to ½ knot E. set.
h Santiago light N. by W. ½ W. (mag.) 8½ m. No current.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Depth.	Character of bottom.
		Lat. N.	Long. W.		
		Caribbean Sea.			
	1884.	° ′ ″	° ′ ″	*Fms.*	
a 211	Feb. 27	19 56 33	75 50 40	211	gy. m. fne. s. brk. co.
212	Feb. 27	19 40 00	75 39 00	2,265	gy. m.
213	Feb. 28	19 23 00	75 30 00	2,275	br. m.
214	Feb. 28	19 06 00	75 21 30	1,768	yl. m. brk. sh. for.
215	Feb. 28	18 54 30	75 16 30	1,486	yl. m. brk. sh. for.
216	Feb. 28	18 32 30	75 06 00	870	wh. s. brk. co. sh.
217	Feb. 28	18 34 00	75 21 00	1,015	lt. m. sh. for.
218	Feb. 28	18 32 40	75 36 00	620	yl. m.
219	Feb. 28	18 22 20	75 41 20	646	brk. sh.
220	Feb. 28	18 12 00	75 46 40	1,153	brk. sh. bk. s.
221	Feb. 28	18 01 30	75 52 00	960	gy. m.
b 222	Feb. 29	17 51 00	76 00 30	450	gy. m. s.
223	Feb. 29	17 49 00	75 54 40	762	yl. m.
224	Feb. 29	17 47 40	75 50 00	768	yl. m. s.
225	Feb. 29	17 46 50	75 47 20	830	yl. m.
226	Feb. 29	17 46 15	75 45 30	828	yl. m.
227	Feb. 29	17 45 20	75 42 45	443	co. s.
228	Feb. 29	17 44 40	75 40 50	335	wh. s. brk. sh.
229	Feb. 29	17 43 55	75 39 00	22	co.
230	Feb. 29	17 43 37	75 38 05	86	co. brk. sh.
231	Feb. 29	17 43 20	75 37 10	98	co.
232	Feb. 29	17 44 20	75 37 40	193	co.
233	Feb. 29	17 45 20	75 38 15	448	co. brk. sh.
234	Feb. 29	17 46 30	75 38 50	540	co.
235	Feb. 29	17 45 25	75 39 05	387	wh. co. s. brk. sh
236	Feb. 29	17 44 05	75 39 00	23	co.
237	Feb. 29	17 44 05	75 39 05	22	co.
238	Feb. 29	17 43 35	75 38 55	21	wh. co.
239	Feb. 29	17 43 05	75 38 50	20	co.
240	Feb. 29	17 42 35	75 38 45	32	co.
241	Feb. 29	17 42 10	75 38 40	200	co. brk. sh.
242	Feb. 29	17 42 15	75 37 40	376	co. brk. sh.
243	Feb. 29	17 42 20	75 36 40	329	co. brk. sh.
244	Feb. 29	17 42 45	75 37 15	198	co. brk. sh.
245	Feb. 29	17 43 15	75 37 50	166	co. brk. sh.
246	Feb. 29	17 44 00	75 39 40	22	brk. sh. co.
247	Feb. 29	17 43 55	75 40 20	21	brk. sh. co.
248	Feb. 29	17 43 50	75 41 00	81	brk. sh. co.
249	Feb. 29	17 43 45	75 41 40	141	brk. sh. co.
250	Feb. 29	17 42 50	75 41 35	21	co.
251	Feb. 29	17 42 35	75 42 05	23	co.
252	Feb. 29	17 42 20	75 42 35	24	co. sh.
253	Feb. 29	17 42 05	75 43 05	261	
254	Feb. 29	17 41 25	75 43 05	90	co.
255	Feb. 29	17 40 30	75 43 00	20	co.
256	Feb. 29	17 41 15	75 42 10	19	co.
257	Feb. 29	17 41 55	75 41 25	21	co.
258	Feb. 29	17 42 15	75 41 00	20	co.
259	Feb. 29	17 42 40	75 40 40	21	co.
260	Feb. 29	17 42 50	75 39 20	21	co.
261	Feb. 29	17 41 35	75 39 40	20	co.
262	Feb. 29	17 40 20	75 40 00	17.5	co.
263	Feb. 29	17 39 45	75 40 10	18.5	co.
264	Feb. 29	17 39 10	75 40 20	20	co.
265	Feb. 29	17 38 00	75 40 40	20	co.
266	Feb. 29	17 36 50	75 41 00	51	co.
267	Feb. 29	17 36 50	75 41 50	19	co.
268	Feb. 29	17 36 55	75 42 40	18	co.
269	Feb. 29	17 37 00	75 43 30	20	co.
270	Feb. 29	17 37 00	75 44 20	19	co.
271	Feb. 29	17 37 05	75 45 15	524	
272	Feb. 29	17 36 30	75 44 45	18	co.
273	Feb. 29	17 36 00	75 44 15	360	co.
274	Feb. 29	17 36 00	75 45 10	250	co.
275	Feb. 29	17 36 05	75 46 10	320	co.
276	Feb. 29	17 36 30	75 48 00	838	co.
277	Feb. 29	17 37 35	75 52 10	875	yl. m. sh. for.
278	Mar. 1	17 38 20	75 56 25	863	yl. m. s. sh.
279	Mar. 1	17 39 10	76 00 35	597	yl. m. s. sh.
c 280	Mar. 1	17 40 10	76 04 50	760	yl. m. s. sh.
281	Mar. 1	17 41 20	76 09 40	414	yl. m. s. sh.
282	Mar. 1	17 42 30	76 14 30	490	hrd.
283	Mar. 1	17 43 40	76 19 15	612	co.
d 284	Mar. 1	17 44 50	76 24 00	581	br. m.
d 285	Mar. 1	17 46 00	76 28 40	590	yl. m.
d 286	Mar. 1	17 47 00	76 33 10	542	bu. m.
d 287	Mar. 1	17 48 10	76 37 50	777	gy. m. bk. s.
d 288	Mar. 1	17 49 30	76 43 35	484	gy. m.

a By bearing and mic. distance of Santiago de Cuba light, plotted in latitude 19° 57′ 26″, longitude 75° 52 13″. Light E. set.

b Bearing and dist. Morant light. NE. set.

c Bearing and distance of Morant light.

d Cross-bearings of objects on shore.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Depth.	Character of bottom.
		Lat. N.	Long. W.		
		Caribbean Sea.			
	1884.	° ′ ″	° ′ ″	*Fms.*	
a 289	Mar. 1	17 51 20	76 44 30	400	gy. m.
a 290	Mar. 11	17 53 05	76 43 00	440	bk. m.
a 291	Mar. 11	17 52 20	76 46 05	18	co.
a 292	Mar. 11	17 48 45	76 46 05	355	br. m. fne. s.
a 293	Mar. 11	17 46 10	76 46 05	26	co.
a 294	Mar. 11	17 41 10	76 46 05	790	br. m. crs. s.
295	Mar. 11	17 38 40	76 41 10	890	
296	Mar. 12	17 37 10	76 36 40	980	bk. m. s.
297	Mar. 12	17 35 40	76 32 10	1,043	gy. s.
298	Mar. 12	17 34 10	76 27 40	1,084	bu. m.
299	Mar. 12	17 32 40	76 23 10	933	co.
300	Mar. 12	17 29 40	76 14 10	822	yl. m. sh. for.
301	Mar. 12	17 28 00	76 09 10	808	yl. m. s.
302	Mar. 12	17 26 45	76 04 10	790	hrd.
303	Mar. 12	17 25 40	76 01 10	620	hrd.
304	Mar. 12	17 31 10	75 58 00	794	yl. m.
305	Mar. 12	17 32 30	75 53 00	723	hrd.
306	Mar. 12	17 32 45	75 49 55	218	co.
307	Mar. 12	17 32 50	75 48 20	490	hrd.
308	Mar. 12	17 34 35	75 46 50	527	
309	Mar. 12	17 34 35	75 44 45	505	gy. s.
310	Mar. 12	17 34 35	75 43 40	500	
311	Mar. 12	17 34 35	75 39 35	515	s.
312	Mar. 12	17 23 40	75 38 15	645	hrd.
313	Mar. 13	17 12 00	75 36 30	915	yl. m. s.
314	Mar. 13	16 54 20	75 33 50	1,012	yl. m. s. for.
315	Mar. 13	16 31 00	75 30 10	1,250	yl m. s. for.
316	Mar. 13	16 07 45	75 26 30	1,230	yl. m. s. for.
317	Mar. 13	15 43 00	75 24 30	1,662	yl. m. s. for.
318	Mar. 13	15 18 30	75 22 30	2,295	
319	Mar. 14	14 42 30	75 18 30	2,315	yl. m. s. for.
320	Mar. 14	14 06 30	75 14 30	2,250	dk. br. m. for.
321	Mar. 14	13 30 00	74 57 00	2,175	dk. br. m s. for.
322	Mar. 14	12 53 30	74 38 00	2,185	bk. m. for.
323	Mar. 15	12 17 00	74 19 00	2,095	bk. m. s.
324	Mar. 15	12 11 30	74 27 30	2,057	bk. s.
325	Mar. 15	11 46 00	74 27 30	1,250	bk. m.
326	Mar. 15	11 31 00	74 28 00	745	bk. m.
327	Mar. 15	11 21 00	74 28 00	578	bu. m.
328	Mar. 15	11 11 00	74 28 00	420	bk. m. s.
329	Mar. 15	11 22 00	74 41 30	440	bk. s. bu. m.
330	Mar. 16	11 33 30	74 57 00	920	bk. s. bu. m.
331	Mar. 16	11 18 30	74 58 20	615	bk. s. bu. m.
332	Mar. 16	11 13 00	75 05 00	457	bk. m.
333	Mar. 22	11 01 00	75 03 00	10	bk. m.
334	Mar. 22	11 01 15	75 08 40	39	bu. c.
335	Mar. 22	11 01 45	75 19 40	228	bu. m.
336	Mar. 22	11 05 00	75 32 00	625	bu. m.
337	Mar. 22	11 08 00	75 41 40	845	br. m.
338	Mar. 22	11 11 00	75 50 30	1,195	br. m. gn. m.
339	Mar. 22	10 56 00	75 49 50	980	br. m. gn. m.
340	Mar. 22	10 42 30	75 49 00	880	br. m. gn. m.
341	Mar. 22	10 30 30	75 48 30	825	br. m.
342	Mar. 23	10 26 15	76 03 00	1,165	br. m.
343	Mar. 23	10 22 10	76 17 30	1,270	br. m.
344	Mar. 23	10 18 00	76 32 00	1,580	br. m.
345	Mar. 23	10 01 30	76 24 45	750	br. m.
346	Mar. 23	9 46 00	76 18 30	255	gn. m.
347	Mar. 23	9 30 00	76 14 45	38	gn. m. s.
348	Mar. 23	9 32 00	76 34 45	466	hrd.
349	Mar. 23	9 33 30	76 43 45	960	br. m. gn. m.
350	Mar. 24	9 36 20	77 02 45	1,616	choc. oz. for
351	Mar. 24	9 39 40	77 25 00	1,363	br. m. for.
352	Mar. 24	9 43 00	77 47 00	570	br. m. for.
353	Mar. 24	9 44 40	77 56 00	550	lt. br. m.
354	Mar. 24	9 47 00	78 09 30	630	br. m. s.
355	Mar. 24	9 48 00	78 24 00	1,017	br. m. s.
356	Mar. 24	9 47 00	78 39 00	962	br. m.
357	Mar. 24	9 45 30	78 54 00	950	gy. m.
358	Mar. 24	9 47 00	79 03 00	1,060	sft. gy. m.
359	Mar. 24	9 48 30	79 11 45	970	gn. m. br. m.
360	Mar. 25	9 51 15	79 20 30	828	gn. m. gy. m. sh.
361	Mar. 25	9 54 00	79 30 00	1,155	br. m. gn. m.
362	Mar. 25	9 47 00	79 32 30	580	bu. m.
363	Mar. 25	9 45 15	79 34 00	370	bu. m.
364	Mar. 25	9 43 15	79 35 30	58	bu. m.
365	Apr. 2	9 38 30	79 59 22	707	stk. c.
366	Apr. 2	9 47 45	80 02 50	611	br. s.
367	Apr. 2	9 57 00	80 06 20	1,153	gy. m.
368	Apr. 2	10 14 20	80 13 30	1,853	br. m. for.

a Cross-bearings of objects on shore.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Depth.	Character of bottom.
		Caribbean Sea.			
	1884.	° ′ ″	° ′ ″	*Fms.*	
369	Apr. 3	10 35 30	80 22 30	1,900	br. m. for.
370	Apr. 3	10 46 30	80 32 00	1,849	br. m.
371	Apr. 3	11 20 00	80 42 10	1,832	br. m. for.
372	Apr. 3	11 43 30	80 51 30	1,570	br. m. for.
373	Apr. 4	12 08 00	81 03 15	1,736	br. m. for.
374	Apr. 4	12 32 00	81 16 00	1,002	br. m. for.
375	Apr. 4	13 12 00	81 27 20	727	yl. m.
a 376	Apr. 4	13 16 05	81 26 40	339	co. s.
a 377	Apr. 9	13 26 10	81 25 10	601	hrd.
378	Apr. 9	13 30 30	81 23 30	472	fne. co. s.
379	Apr. 9	13 41 20	81 15 30	262	co. s. for.
380	Ayr. 9	13 45 15	81 11 30	498	yl. m. co.
381	Apr. 9	13 53 15	81 03 45	625	hrd.
382	Apr. 9	14 01 20	80 56 10	577	co. and s.
383	Apr. 9	14 09 20	80 50 10	596	yl. m.
384	Apr. 9	14 17 00	80 43 30	661	hrd.
385	Apr. 9	14 25 45	80 37 45	889	co.
386	Apr. 10	14 34 30	80 32 00	982	yl. m. for.
387	Apr. 10	14 43 20	80 26 00	1,066	yl. m. for.
388	Apr. 10	14 48 30	80 23 00	1,069	yl. m. fne. co.
389	Apr. 10	14 53 40	80 20 00	1,151	yl. m. fne. co.
390	Apr. 10	14 58 50	80 17 00	971	yl. m. fne. co.
391	Apr. 10	15 09 00	80 23 00	756	yl. co. oz. for.
392	Apr. 10	15 19 00	80 28 45	690	yl. co. oz.
393	Apr. 10	15 47 30	80 46 00	511	br. m. for.
394	Apr. 10	16 02 00	80 53 20	19	co.
395	Apr. 10	16 15 00	81 01 00	19	co.
396	Apr. 10	16 28 30	81 08 00	23	co.
397	Apr. 11	16 41 30	81 21 40	136	brk. co.
398	Apr. 11	17 03 30	81 42 40	444	gy. m. fne. co. for.
399	Apr. 11	17 25 00	82 05 40	920	yl. oz. for.
400	Apr. 11	17 42 00	82 34 00	3,169	yl. oz. for.
401	Apr. 11	18 01 30	82 54 10	2,695	yl. oz. for.
402	Apr. 11	18 18 45	83 01 10	2,299	yl. oz. for.
403	Apr. 12	18 24 20	83 15 15	3,008	yl. oz. for.
404	Apr. 12	18 30 00	83 16 30	2,829	yl. oz. for.
405	Apr. 12	18 43 00	83 36 45	735	yl. oz. for. pter.
406	Apr. 12	18 48 30	83 45 30	708	yl. oz. for.
407	Apr. 12	18 49 00	83 46 45	12	co.
408	Apr. 12	18 52 00	83 52 45	14	co.
409	Apr. 12	18 54 45	83 53 45	891	yl. oz.
410	Apr. 12	19 11 00	84 01 15	2,014	yl. oz. for.
411	Apr. 12	19 55 00	84 19 45	2,522	yl. oz. for.
412	Apr. 13	20 33 00	84 36 20	2,575	yl. oz. for.
		Gulf of Mexico.			
413	Apr. 13	21 15 41	84 48 00	2,350	yl. oz. for.
414	Apr. 13	21 40 00	84 57 00	1,550	yl. oz. for.
b 415	Apr. 13	21 44 40	84 58 45	950	yl. oz. for.
c 419	Apr. 14	23 48 14	84 06 55	1,356	yl. oz. for.
d 420	May 1	23 06 00	83 03 45	625	co.
421	May 2	22 04 15	84 59 35	476	yl. co. m.
422	May 2	22 01 25	85 00 30	243	co.
423	May 2	22 00 25	85 00 25	314	co.
424	May 2	22 00 00	85 00 15	355	co.
425	May 2	21 59 00	84 59 55	357	co.
426	May 2	21 58 00	84 59 35	279	co.
427	May 2	21 59 15	85 00 35	370	fne. s.
e 428	May 2	22 00 42	85 02 00	15.5	co.
429	May 2	22 01 10	85 02 20	19	co.
430	May 2	22 01 30	85 02 40	114	co.
431	May 2	22 01 20	85 03 30	256	co.
432	May 2	22 00 20	85 03 25	250	fne. co.
433	May 2	22 00 25	85 03 05	207	co.
434	May 2	22 00 30	85 02 50	128	co.
435	May 2	22 00 35	85 02 30	16	co.
436	May 2	22 00 10	85 02 15	252	co. brk. sh.
437	May 2	22 00 20	85 01 45	227	co. brk. sh.
438	May 2	22 00 48	85 01 30	15.5	co.
439	May 2	22 01 16	85 01 15	14.5	co.
440	May 2	22 01 44	85 01 00	16.5	co.
441	May 2	22 02 12	85 01 45	24.5	co. brk. sh.
442	May 2	22 02 40	85 00 30	251	co. br. r.
443	May 2	22 02 45	85 01 50	424	co.
444	May 2	22 02 10	85 02 05	270	co. brk. sh.
445	May 2	22 01 45	85 02 05	21	co.
446	May 2	22 01 15	85 02 05	16.5	co.

a Cross bearings on Old Providence Island.
b Bearing of Cape San Antonio light, and altitude of ∗ Capella.
c Serial Nos. 416 to 418 missing.
d Astronomical observation; cross bearings on shore; 1½ knots W. set.
e Anchored boat and established position.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Depth.	Character of bottom.
		Lat. N.	Long. W.		
		Gulf of Mexico.			
	1884.	° ′ ″	° ′ ″	*Fms.*	
447	May 2	22 04 18	85 02 15	567	co.
448	May 2	22 05 50	85 04 30	701	yl. oz. for.
449	May 2	22 07 20	85 06 45	913	yl. oz. for.
450	May 2	22 08 55	85 09 00	1,069	yl. oz. for.
451	May 2	22 10 50	85 12 00	1,186	for. pter.
452	May 2	22 09 40	85 18 40	1,238	for. pter.
453	May 2	22 06 30	85 15 00	1,149	co.
454	May 2	22 03 50	85 11 55	871	co.
455	May 2	W. of Antonio Knoll.		277	co.
456	May 2	W. of Antonio Knoll.		490	co.
457	May 3	21 57 10	85 04 30	450	co.
458	May 3	21 55 45	85 02 50	576	co.
459	May 3	About 2.5 miles WNW. of San Antonio light.		402	co.
460	May 3	21 53 00	85 02 55	689	co.
461	May 3	21 54 25	85 07 55	618	co.
462	May 3	21 55 50	85 13 00	691	co.
463	May 3	21 56 30	85 15 20	608	co.
464	May 3	21 59 55	85 13 45	850	co.
465	May 3	21 58 30	85 10 50	543	co.
466	May 3	21 57 00	85 08 00	487	co. brk. sh.
467	May 3	21 55 30	85 05 15	593	co. brk. sh.
468	May 3	21 54 05	85 02 40	523	co.
469	May 3	21 53 05	85 00 40	558	co.
470	May 3	21 52 35	85 00 45	541	co. oz.
471	May 3	21 52 46	85 01 45	629	co. oz.
472	May 3	21 51 55	85 02 30	692	co. oz.
473	May 3	21 52 10	85 05 30	583	co.
474	May 3	21 52 30	85 09 35	885	co. oz.
475	May 3	21 52 50	85 13 25	775	hrd.
476	May 3	21 49 45	85 13 25	923	rky.
477	May 3	21 50 10	85 08 45	887	rky.
478	May 3	21 50 45	85 04 10	815	rky.
479	May 3	21 51 20	84 59 30	263	rky.
480	May 3	21 50 10	85 01 35	342	co.
481	May 3	21 49 05	85 05 50	674	co.
482	May 3	21 47 55	85 10 00	937	co. s.
483	May 3	21 46 25	85 15 20	1,023	co. s.
484	May 3	21 43 20	85 14 00	1,062	fne. co.
485	May 3	21 45 30	85 10 06	971	co.
486	May 3	21 48 00	85 04 45	574	hrd.
487	May 3	21 50 20	84 59 30	306	hrd.
488	May 3	21 47 35	84 57 15	329	hrd.
489	May 4	21 45 50	84 59 15	874	co. br. m.
490	May 4	21 48 00	84 57 30	288	co.
491	May 4	21 50 10	84 58 45	232	co.
492	May 4	21 50 45	84 59 00	255	fne. co.
493	May 4	21 53 05	84 59 30	415	fne. co.
494	May 4	21 54 00	85 00 40	537	co.
495	May 4	21 55 00	85 01 50	516	hrd.
496	May 4	21 54 45	84 58 40	274	hrd.
497	May 4	21 55 55	85 00 15	475	co.
498	May 4	21 57 10	85 01 50	474	co. crs. g.
499	May 4	21 58 25	85 03 40	461	co.
500	May 4	21 59 40	85 05 15	283	hrd.
501	May 4	22 01 05	85 07 10	703	yl. m.
502	May 4	22 00 35	85 08 25	732	yl. oz. for.
503	May 4	22 00 05	85 09 40	776	hrd.
504	May 4	21 59 20	85 08 40	715	yl. oz.
505	May 4	21 59 10	85 06 55	554	yl. oz.
506	May 4	21 59 50	85 07 45	747	yl. oz.
507	May 4	21 58 30	85 06 10	423	brk. sh.
508	May 4	21 58 45	85 04 50	269	hrd.
509	May 4	22 03 00	85 04 50	657	yl. oz.
510	May 4	22 02 20	85 03 00	526	yl. oz.
511	May 5	22 07 05	85 02 45	600	co.
512	May 5	22 09 15	85 03 30	818	hrd.
513	May 5	22 11 40	85 04 15	986	yl. m. brk. co.
514	May 5	22 12 15	85 00 45	953	yl. m. fne. co.
515	May 6	22 09 15	85 00 25	769	yl. oz. for.
516	May 6	22 06 30	85 00 00	499	yl. m.
b517	May 6	22 41 20	84 15 00	388	yl. oz.
518	May 6	22 45 20	84 15 00	817	yl. oz.
519	May 6	22 49 20	84 15 00	950	fne. co. s.
520	May 6	22 50 10	84 11 00	801	yl. oz. s. for.

a Latitudes of positions on Antonio Knoll absolute; those of other soundings and the longitudes of all depend on Cape San Antonio light being in Lat. 21° 51′ 30″ N., Long. 84° 57′ 38″ W.
b N. end of Jutias Cay ENE. (mag.).

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Depth.	Character of bottom.
		Florida to Cape Hatteras.			
	1884.	° ′ ″	° ′ ″	*Fms.*	
521	May 12	30 46 00	78 35 00	470	g. brk. sh.
522	May 14	34 14 00	72 35 30	2,537	br. oz.
523	May 14	34 48 45	72 25 00	2,462	br. oz.
		Cape Hatteras to Nantucket.			
524	July 20	37 57 20	73 56 10	86	g.
525	July 22	39 29 00	72 22 00	79	gn. m. s.
526	July 22	39 30 00	72 18 00	104	gn. m. s.
527	July 22	39 32 00	72 18 20	197	stf. bu. c.
528	July 22	39 29 30	72 14 40	121	gy. m. s.
529	July 22	39 28 00	72 16 00	94	gn. m.
530	July 22	39 27 40	72 18 30	91	bk. m. fne. s.
531	July 22	39 27 20	72 20 40	73	bk. m. s.
532	July 22	39 31 50	72 05 00	143	gy. S. bk. Sp.
533	July 23	39 23 45	71 43 00	992	gn. m. r.
534	Aug. 2	40 00 00	70 38 00	172	gy. m. fne. s.
535	Aug. 2	40 01 30	70 38 00	139	gy. m. fne. s.
536	Aug. 2	40 03 00	70 38 00	101	gn. m. fne. s.
537	Aug. 2	39 58 45	70 55 30	168	gn. m. s.
538	Aug. 3	40 04 30	71 20 00	57	gy. s.
539	Aug. 3	40 02 00	71 13 45	100	gn. m. s. sp.
540	Aug. 3	40 01 30	71 12 30	113	gn. m. s. bk. sp.
541	Aug. 3	39 56 30	71 10 00	194	gn. m. s.
542	Aug. 3	39 56 30	71 08 00	192	gn. m. s.
543	Aug. 3	39 54 00	71 04 00	265	gn. m. s.
544	Aug. 3	39 55 00	71 07 00	221	gn. m. s.
545	Aug. 4	39 47 00	70 16 30	784	gn. m. s.
546	Aug. 5	39 54 30	70 15 40	762	gn. m.
547	Aug. 5	39 50 30	70 15 40	769	gn. m. s.
548	Aug. 19	39 48 30	71 41 15	111	gn. m. s.
549	Aug. 20	39 34 00	71 34 30	925	gy. oz.
550	Aug. 22	40 00 00	70 28 30	243	gn. m.
551	Aug. 22	39 53 00	70 31 45	356	gn. m.
552	Aug. 23	39 40 05	69 23 00	1,094	bu. oz.
553	Sept. 7	37 41 00	69 16 15	2,704	gy. oz.
554	Sept. 11	37 22 53	73 06 30	1,600	gy. glob. oz.
555	Sept. 12	38 38 20	73 10 00	190	gn. m. fne. s.
556	Sept. 12	38 40 00	73 03 00	474	gn. m.
557	Sept. 13	39 08 30	72 12 30	851	gn. m.
558	Sept. 26	40 37 00	70 52 00	37	gn. m.
559	Oct. 18	37 07 30	74 37 00	54	s. g.
560	Oct. 21	35 22 00	74 54 30	43	gy. bk. s.
561	Oct. 21	35 21 30	74 48 30	1,007	yy. m.
		Cape Hatteras to Savannah.			
	1885.				
562	Jan. 5	33 03 30	77 53 00	29	co. s. bk. sh.
563	Jan. 5	32 59 15	77 55 30	62	yl. s. bk. sh.
564	Jan. 5	32 57 30	77 56 30	66	co. s. bk. sh.
		Gulf of Mexico.			
565	Jan. 22	21 00 00	86 24 30	92	co.
566	Feb. 7	29 31 00	85 36 20	16	fne. wh. s.
567	Feb. 7	29 28 00	85 36 50	16	fne. wh. s.
568	Feb. 7	29 25 00	85 37 20	15	fne. s. bk. sh.
569	Feb. 7	29 16 30	85 34 00	27	gy. s. bk. sh.
570	Feb. 7	29 15 19	85 34 00	30	gy. s. bk. sh.
571	Feb. 11	29 26 45	87 44 00	34	fne. blk. s.
572	Feb. 11	29 22 00	87 46 30	43	crs. gy. s.
573	Feb. 11	29 17 30	87 49 00	99	bu. m.
574	Feb. 11	29 13 00	87 51 30	206	blk. m.
575	Feb. 11	29 08 30	87 54 00	362	blk. m.
576	Feb. 11	29 04 00	87 56 30	599	gn. m.
577	Feb. 11	28 58 15	88 00 00	740	bu. m.
578	Feb. 11	28 54 00	88 02 30	698	gy. m.
579	Feb. 11	28 56 30	87 58 30	747	gy. m.
580	Feb. 11	28 59 00	87 55 30	611	gy. m.
581	Feb. 11	29 02 45	87 53 00	737	gn. m.
582	Feb. 11	28 59 30	88 06 00	573	gn. m.
583	Feb. 11	28 58 20	88 14 00	486	gn. m.
584	Feb. 11	29 19 30	88 11 30	46	gy. m.
585	Feb. 11	29 21 45	88 14 00	35	gy. s.
586	Feb. 11	29 22 30	88 17 00	32	gy. s. m.
587	Feb. 11	29 22 15	88 21 00	30	gn. m.
588	Feb. 11	29 17 30	88 21 00	36	gn. m.
589	Mar. 4	29 17 15	88 05 30	54	bu. m.
590	Mar. 4	29 22 00	88 04 30	40	bu. m. blk. sp.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Gulf of Mexico.						
	1885.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
591	Mar. 4	29 28 00	88 03 00	60	60	.....	25	gy. s.
592	Mar. 4	29 24 00	87 52 00	64	62	.....	36	fne. gy. s. bk. sp.
593	Mar. 4	29 33 00	87 59 00	61	60	.....	25	crs. s. bk. sp. brk. sh.
594	Mar. 4	29 36 30	87 36 00	60	61	.....	22	fne. wh. s.
595	Mar. 4	29 40 30	87 32 30	59	60	.....	22	fne. wh. s.
596	Mar. 7	29 16 19	85 49 30	58	64	.....	30	gy. s. bk. sp. brk. sh.
597	Mar. 7	29 16 00	85 47 30	58	64	.....	29	yl. s. bk. sp. brk. sh.
598	Mar. 7	29 17 20	85 45 30	58	64	.....	31	yl. s. bk. sp. brk. sh.
599	Mar. 7	29 18 40	85 43 30	61	62	.....	30	yl. s. bk. sp. brk. sh.
600	Mar. 7	29 20 00	85 41 30	60	61	.....	27	yl. s. bk. sp. brk. sh.
601	Mar. 7	29 19 00	85 41 45	60	61	.....	29	yl. s. bk. sp. brk. sh.
602	Mar. 7	29 18 15	85 41 60	60	61	.....	28	yl. s. bk. sp. brk. sh.
603	Mar. 7	29 17 30	85 40 15	61	60	.....	29	yl. s. bk. sp. brk. sh.
604	Mar. 7	29 16 45	85 39 30	61	60	.....	28	yl. s. bk. sp. brk. sh.
605	Mar. 7	29 16 00	85 38 45	61	60	.....	31	yl. s. bk. sp. brk. sh.
606	Mar. 7	29 15 11	85 38 00	61	60	.....	33	gy. s. bk. sp.
607	Mar. 7	29 15 10	85 37 00	61	60	.....	32	fne. gy. s. bk. sp.
608	Mar. 7	29 15 10	85 36 00	63	61	.....	31	fne. gy. s. bk. sp.
609	Mar. 7	29 15 40	85 35 15	65	62	.....	29	fne. gy. s.
610	Mar. 7	29 16 15	85 34 30	65	62	.....	25	crs. r. bk. s. sh.
611	Mar. 7	29 15 00	85 34 30	65	63	.....	27	wh. s. bk. sp. sh.
612	Mar. 7	29 14 00	85 33 30	65	63	.....	27	fne. s. bk. sp.
613	Mar. 7	29 13 00	85 32 30	65	63	.....	26	fne. wh. s. bk. sp.
614	Mar. 7	29 12 30	85 32 00	65	63	.....	26	crs. s. bk. sp. sh.
615	Mar. 7	29 15 10	85 34 30	65	64	.....	29	fne. wh. s. bk. sp.
616	Mar. 7	29 16 30	85 36 00	65	64	.....	29	fne. wh. s. bk. sp.
617	Mar. 7	29 17 10	85 36 30	64	64	.....	27	fne. wh. s. bk. sp.
618	Mar. 7	29 17 50	85 37 00	63	64	.....	27	fne. s. bk. sp. brk. sh.
619	Mar. 7	29 18 30	85 37 30	63	64	.....	28	gy. bk. s. brk. sh.
620	Mar. 7	29 19 15	85 38 00	63	64	.....	26	gy. bk. s. brk. sh.
621	Mar. 7	29 19 40	85 39 20	63	63	.....	26	gy. bk. s. brk. sh.
622	Mar. 7	29 20 05	85 40 40	63	63	.....	26	gy. bk. s. brk. sh.
623	Mar. 7	29 20 30	85 42 00	63	63	.....	26	gy. bk. s. brk. sh.
624	Mar. 7	29 19 45	85 42 50	62	63	.....	28	gy. bk. s. brk. sh.
625	Mar. 7	29 19 20	85 43 15	62	63	.....	28	gy. bk. s. brk. sh.
626	Mar. 7	29 19 00	85 43 15	62	63	.....	28	gy. bk. s. brk. sh.
627	Mar. 8	29 16 15	85 42 30	58	60	.....	30	gy. bk. s. brk. sh.
628	Mar. 8	29 16 45	85 41 00	56	59	.....	29	gy. bk. s. brk. sh.
629	Mar. 8	29 15 30	85 40 15	57	60	.....	29	gy. bk. s. brk. sh.
630	Mar. 8	29 17 45	85 42 00	57	60	.....	31	gy. bk. s. brk. sh.
631	Mar. 8	29 20 30	85 44 00	57	60	.....	27	gy. bk. s. brk. sh.
632	Mar. 8	29 19 30	85 45 00	57	60	.....	29	gy. bk. s. brk. sh.
633	Mar. 8	29 20 15	85 45 40	57	60	.....	29	gy. bk. s. brk. sh.
634	Mar. 8	29 21 00	85 46 20	56	60	.....	28	g. brk. s. sh.
635	Mar. 8	28 51 20	85 10 00	64	65	.....	31	gy. s. brk. sh.
636	Mar. 8	28 52 10	85 09 20	64	65	.....	30	crs. gy. s. brk. sh.
637	Mar. 8	28 53 00	85 08 40	64	65	.....	29	gy. s. brk. sh.
638	Mar. 8	28 54 00	85 08 00	63	65	.....	28	gy. s. bk. sp. brk. sh.
639	Mar. 15	28 48 00	84 36 00	64	63	.....	24	s. co. brk. sh.
640	Mar. 15	28 47 00	84 35 50	63	62	.....	24	s. co. brk. sh.
641	Mar. 15	28 46 00	84 35 40	62	61	.....	23	s. co. brk. sh.
642	Mar. 15	28 45 00	84 35 30	61	60	.....	24	s. co. brk. sh.
643	Mar. 15	28 44 00	84 35 20	60	59	.....	24	s. co.
644	Mar. 15	28 43 00	84 35 30	60	62	62.1	24	s. co. brk. sh.
645	Mar. 15	28 42 00	84 35 40	60	61	.....	26	s. bk. sp. brk. sh.
646	Mar. 15	28 41 30	84 35 50	60	61	.....	26	crs. bk. gy. s. co.
647	Mar. 15	28 41 00	84 36 00	60	61	.....	27	gy. s. bk. sp. co.
648	Mar. 15	28 40 45	84 35 30	59	61	.....	26	wh. s. bk. sp. brk. sh.
649	Mar. 15	28 40 00	84 32 40	58	62	.....	26	wh. s. brk. sh.
650	Mar. 15	28 42 00	84 29 50	58	62	.....	24	yl. s. bk. sp. brk. sh.
651	Mar. 15	28 43 20	84 28 00	58	62	.....	22	co.
652	Mar. 15	28 44 00	84 27 00	58	62	.....	23	fne. wh. s. brk. sh.
653	Mar. 15	28 44 40	84 26 00	58	62	.....	21	crs. gy. s.
654	Mar. 16	28 50 00	84 32 30	59	62	.....	21	brk. sh.
655	Mar. 16	28 45 00	84 33 15	59	62	.....	24	fne. wh. s. bk. sp. brk. sh.
656	Mar. 16	28 40 00	84 32 00	60	63	.....	27	fne. wh. s. bk. sp.
657	Mar. 16	28 38 45	84 28 30	59	63	.....	24	fne. wh. s. brk. sh.
658	Mar. 16	28 32 45	84 27 00	60	64	.....	24	crs. gy. s. brk. sh.
659	Mar. 16	28 25 00	84 21 00	62	63	.....	24	crs. s. bk. sp. sh.
660	Mar. 16	28 21 00	84 18 00	62	63	.....	23	crs. s. bk. sp. sh.
661	Mar. 16	28 20 00	84 12 00	62	63	.....	22	gy. s.
662	Mar. 16	28 19 45	84 06 00	59	63	.....	21	wh. s. bk. sp. brk. sh.
663	Mar. 16	28 15 45	84 02 35	60	62	.....	21	wh. s. bk. sp. brk. sh.
664	Mar. 16	28 11 45	83 59 10	61	63	.....	22	wh. s. bk. sp. brk. sh.
665	Mar. 16	28 07 45	83 55 40	60	64	.....	22	wh. s. bk. sp.
666	Mar. 16	28 03 45	83 52 15	60	64	.....	22	fne. gy. s. bk. sp.
667	Mar. 16	27 59 40	83 48 50	60	63	.....	22	crs. s. brk. sh.
668	Mar. 16	27 55 30	83 45 25	60	63	.....	22	gy. bk. s.
669	Mar. 16	27 51 30	83 42 00	60	63	.....	21	fne. wh. s. bk. sp.
670	Mar. 16	27 50 00	83 36 15	60	62	.....	20	wh. s. bk. sp.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Gulf of Mexico.						
	1885.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
671	Mar. 16	27 49 00	83 30 30	60	61	.....	18	crs. s. bk. sp. brk. sh.
672	Mar. 16	27 48 10	83 24 45	60	66	.....	16½	gy. s. brk. sh.
673	Mar. 16	27 47 30	83 19 00	60	62	.....	15	gy. s. bk. sp.
674	Mar. 16	27 46 45	83 13 15	60	62	.....	12	crs. gy. s. bk. sp. brk. sh.
675	Mar. 16	27 46 10	83 07 30	60	62	.....	10	crs. gy. s. bk. sp.
676	Mar. 16	27 46 00	83 02 00	60	62	.....	8	gy. s. bk. sp. brk. sh.
677	Mar. 18	27 16 00	83 10 00	65	64	.....	18	gy. bk. s.
678	Mar. 18	27 08 30	83 19 30	67	66	.....	25	crs. gy. bk. s.
679	Mar. 18	26 58 00	83 22 30	68	66	.....	26	crs. gy. s. brk. sh.
680	Mar. 18	26 53 00	83 24 00	67	66	.....	27	wh. s. bk. sp. brk. sh.
681	Mar. 18	26 42 30	83 22 45	80	67	.....	29	crs. s. bk. sp. brk. sh.
682	Mar. 18	26 38 00	83 20 00	73	67	.....	28	crs. s. bk. sp.
683	Mar. 19	26 28 15	83 11 00	63	67	.....	26	fne. wh. s. bk. sp.
684	Mar. 19	26 23 15	83 11 15	61	67	.....	28	crs. gy. s. bk. sp. brk. sh.
685	Mar. 19	26 12 30	83 06 30	63	66	.....	27	crs. gy. s. bk. sp. brk. sh.
686	Mar. 19	26 08 30	83 03 45	63	66	.....	25	fne. wh. s. bk. sp. brk. sh.
687	Mar. 19	26 04 30	83 01 00	63	66	.....	24	fne. wh. s. bk. sp. brk. sh.
688	Mar. 19	25 54 00	82 59 30	67	66	.....	24	fne. wh. s.
689	Mar. 19	25 49 00	83 01 00	66	67	.....	25	fne. wh. s.
690	Mar. 19	25 44 30	83 02 30	67	68	.....	27	s. co.
691	Mar. 19	25 29 30	83 01 00	68	69	.....	27	gy. s. brk. sh.
692	Mar. 19	25 34 30	83 01 00	67	69	.....	27	gy. s. bk. sp.
693	Mar. 19	25 29 30	83 01 00	67	69	.....	28	crs. gy. s. brk. sh.
694	Mar. 19	25 24 30	83 00 00	67	69	.....	27	gy. s. bk. sp.
695	Mar. 19	25 19 30	82 59 30	68	69	.....	27	gy. m. brk. sh.
696	Mar. 19	25 14 30	82 59 00	68	69	.....	27	gy. m. fne. s. brk. sh.
697	Mar. 19	25 09 30	82 59 00	67	69	.....	27	brk. sh.
		Savannah to Cape Hatteras.						
698	Apr. 1	31 55 00	79 20 00	66	69	60.8	54	gy. bk. s. brk. sh.
699	Apr. 1	31 54 45	79 17 00	66	69	60.3	86	gy. m. brk. sh.
700	Apr. 2	33 21 30	77 09 00	64	70	66.8	71	gy. s.
701	Apr. 2	33 35 00	76 42 15	65	72	65.2	91	fne. gy. s.
702	Apr. 3	36 30 00	73 14 00	69	72	36.8	2,340	bu. oz.
703	Apr. 4	36 45 00	73 28 00	68	66	37.2	1,646	bu. oz.
704	Apr. 4	36 57 30	73 47 00	61	55	37.5	1,436	bu. oz.
705	Apr. 4	37 01 08	74 10 00	50	52	38.7	1,208	bu. oz.
706	Apr. 4	37 09 23	74 30 30	45	46	.....	336	gn. m.
707	Apr. 5	37 03 00	74 39 00	42	46	.....	50	fne. yl. s. bk. sp.
708	Apr. 5	37 03 45	74 37 10	42	46	46.8	51	fne. yl. s. bk. sp.
709	Apr. 5	37 03 40	74 35 00	42	47	46.8	54	yl. s. bk. sp. brk. sh.
710	Apr. 5	37 03 30	74 33 30	42	47	47.7	59	g. crs. s. brk. sh.
711	Apr. 5	37 03 00	74 33 00	42	49	.....	67	(Lost lead.)
712	Apr. 5	37 04 30	74 32 00	43	49	.....	98	bk. s.
713	Apr. 5	37 05 00	74 57 30	42	44	43	24	gy. s. brk. sh.
714	Apr. 5	37 02 30	75 22 00	43	40	40.5	17	fne. wh. s. bk. sp.
715	Apr. 5	36 59 00	75 45 00	44	42	41.3	9	fne gy. s. bk. sp.
716	Apr. 5	36 57 30	75 58 00	46	43	42	6	gy. bk. s.
717	Apr. 5	37 07 30	76 08 30	50	44	42.5	6½	m. brk. sh.
718	Apr. 5	37 32 00	76 08 00	48	44	40.5	7½	gn. m.
719	Apr. 6	37 54 00	76 09 00	50	42	37.7	14	bu. m.
720	Apr. 6	38 07 30	76 32 00	52	43	38.7	12	bu. m.
721	June 3	37 07 30	74 34 00	61	60	.....	75	fne. gy. s.
722	June 3	37 08 00	74 34 45	61	61	54	61	crs. gy. sp.
723	June 3	37 08 20	74 34 00	66	67	52.5	68	crs. gy. bk. brk. sh.
724	June 3	37 09 30	74 33 45	67	67	52.5	75	crs. gy. s. bk. sp. brk. sh.
725	June 3	37 10 15	74 31 00	65	67	.....	307	gn. m.
726	June 3	37 11 30	74 32 30	65	67	51.5	103	gy. m. crs. s. bk. sp.
727	June 4	36 40 30	74 42 00	69	68	48.8	135	m. fne. bk. s.
728	June 4	36 43 00	74 41 00	74	69	48.8	160	bk. m.
729	June 4	36 43 00	74 42 00	75	70	52	98	brk. sh. g
730	June 4	36 43 00	74 46 30	75	70	.....	78	s. g.
731	June 5	35 26 00	74 42 00	75	76	39.5	87	gy. m.
732	June 5	35 26 30	74 44 00	76	74	40.5	388	bk. m.
733	June 5	35 27 00	74 46 00	76	74	44	210	bk. m.
734	June 5	35 27 15	74 42 30	72	75	54	69	bk. m.
735	June 5	35 12 00	75 09 30	75	75	72.5	17	gy. s. brk. sh.
736	June 5	35 12 15	75 05 00	76	76	65	50½	fne. gy. s. bk. sp. brk. sh.
737	June 5	35 12 30	75 03 30	76	76	60	72	crs. gy. s. brk. sh.
738	June 5	35 12 45	75 02 00	76	76	60	68	r. co.
739	June 5	35 13 00	75 01 00	76	76	53	123	gy. s. bk. sp. brk. sh.
740	June 5	35 11 00	75 07 00	78	75	65	52	crs gy. s. bk. sp.
741	June 6	34 58 00	75 12 00	66	75	58	66	fne. gy. s. bk. sp.
742	June 6	34 59 00	75 13 00	66	75	61	54	fne. gy. s. bk. sp.
		Cape Cod to Newfoundland.						
743	June 19	41 15 30	64 23 00	66	69	37.1	1,915	yl. oz.
744	June 19	41 18 15	63 55 00	68	66	.....	2,044	yl. oz.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Cape Cod to Newfoundland.						
	1885.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
745	June 19	41 19 23	63 35 30	71	69	37	2,071	gy. oz.
746	June 19	41 23 20	63 23 15	67	59	36.8	2,035	br. oz.
747	June 19	41 26 15	63 15 00	63	57	36.8	2,020	br. oz.
748	June 19	41 22 00	63 10 00	61	60	36.7	2,094	yl. oz.
749	June 19	41 20 30	62 57 00	61	61	37	2,178	gy. oz.
750	June 20	40 40 30	60 33 00	63	75	36.5	2,995	yl. oz.
751	June 21	40 21 00	56 27 00	64	68	37.8	3,103	gy. oz.
752	June 21	40 24 30	54 24 00	78	74	36.8	2,957	gy. oz.
753	June 21	40 18 00	53 39 30	66	70	36.8	2,863	gy. oz.
754	June 22	40 16 00	53 16 30	66	69	37	2,882	gy. oz.
755	June 22	40 13 00	53 02 00	66	70	38.6	2,897	gy. oz.
756	June 22	40 55 30	52 02 30	71	67	36.8	2,873	gy. oz.
757	June 22	41 51 00	51 31 00	56	54	38.3	2,118	gy. oz.
758	June 23	42 18 30	51 16 00	51	52	37.2	1,499	gy. oz.
759	June 23	42 37 00	51 05 30	51	50	38	1,070	gn. oz.
760	June 23	42 51 30	50 55 00	52	45	38.7	970	hrd.
761	June 23	42 56 00	50 50 00	51	45	38.7	309	gn. m. s.
762	June 24	43 38 00	49 42 00	53	48	39.2	30	s. brk. sh.
763	June 24	43 38 00	49 34 30	53	48	36	38	wh. s. bk. sp. brk. sh.
764	June 24	43 38 00	49 27 00	53	49	.....	125	gn. m. crs. gy. s.
765	June 24	44 26 00	49 33 00	51	45	35.1	34	wh. s. brk. sh.
766	June 24	44 57 00	49 38 00	46	44	32.7	36	wh. s. brk. sh.
767	June 25	46 29 00	49 39 30	48	43	34.4	39	gy. s.
768	July 2	46 02 30	53 26 00	48	47	29.5	76	crs. gy. bk. s.
769	July 3	45 54 00	53 53 00	49	47	29.5	78	dk. gn. s. brk. sh.
770	July 3	45 52 00	53 59 00	49	47	29.5	75	fne. gy. s.
771	July 3	45 49 45	54 06 30	50	46	29.7	67	bk. s.
772	July 4	44 21 30	56 52 15	56	52	38.7	761	gy. oz.
773	July 4	44 22 50	56 56 30	59	54	38.7	795	gy. oz.
774	July 4	44 24 10	57 00 40	59	53	38.7	566	hrd.
775	July 4	44 25 30	57 04 45	59	53	39.7	366	gy. oz. p.
776	July 4	44 26 00	57 06 15	59	53	39.7	454	gy. oz.
777	July 4	44 27 00	57 09 15	59	53	40	333	crs. s. g.
778	July 4	44 30 30	57 12 45	54	51	.....	99	crs. s. p.
779	July 5	44 05 15	57 14 15	54	54	.....	346	gy. c.
780	July 5	44 05 15	57 15 30	54	54	.....	375	s. brk. co.
781	July 5	44 06 00	57 17 00	53	52	.....	90	wh. s. p.
782	July 5	44 06 30	57 17 00	54	52	.....	142	hrd. wh. s.
783	July 5	44 11 00	57 14 45	55	53	.....	183	p.
784	July 5	44 13 30	57 13 45	55	53	.....	155	fge. p.
785	July 5	44 24 45	57 10 15	59	54	.....	204	gy. s.
786	July 5	44 26 30	57 10 45	57	54	.....	175	crs. s.
787	July 5	44 28 30	57 10 45	57	54	.....	186	fne. s.
788	July 5	44 28 30	57 12 45	57	54	39.7	145	fne. gy. s.
789	July 5	44 29 00	57 14 45	57	54	.....	40	hrd. crs. p.
790	July 5	44 31 00	57 14 45	57	54	.....	42	hrd. crs. p.
791	July 5	44 33 00	57 14 45	57	54	.....	48	fne. wh. s.
792	July 5	44 35 00	57 14 45	57	54	.....	90	yl. s.
793	July 5	44 35 00	57 12 15	56	53	.....	188	m. fne. s.
794	July 5	44 39 00	57 17 00	55	53	.....	124	wh. s.
795	July 6	45 03 00	57 56 00	50	52	32	39	hrd.
796	July 6	45 16 00	58 11 45	50	52	33.5	75	wh. s.
797	July 6	45 21 30	58 18 45	50	52	32	54	rot. co.
798	July 6	45 27 00	58 28 45	50	52	.....	45	fne. wh. s. bk. sp.
799	July 6	45 24 00	58 36 45	51	53	.....	67	fne. m.
800	July 6	45 21 30	58 44 45	51	53	32	42	wh. s. p.
801	July 6	45 18 30	58 52 45	52	53	.....	45	yl. s.
802	July 6	45 14 00	59 08 15	54	54	.....	48	s. g.
803	July 6	45 09 30	59 25 15	54	54	.....	43	hrd.
804	July 6	45 07 00	59 28 45	58	56	.....	46	yl. s.
805	July 6	45 06 00	59 31 30	58	56	32.3	48	yl. s.
806	July 6	45 05 00	59 34 00	58	55	.....	52	yl. s.
807	July 6	45 03 00	59 39 45	60	56	.....	58	yl. s.
808	July 6	44 36 00	59 51 45	59	58	35.8	48	yl. s. g.
809	July 6	44 32 30	59 46 45	59	58	35.3	70	fne. wh. s.
810	July 7	44 40 00	59 53 45	58	58	34.8	48	s. g.
811	July 7	44 39 30	59 57 45	58	58	.....	54	s. brk. p.
812	July 7	44 38 00	60 03 45	58	58	.....	57	fne. gy. bk. s.
813	July 7	44 32 00	60 11 15	57	58	.....	74	s. g.
814	July 7	44 28 00	60 16 15	59	58	.....	33	s. g.
815	July 7	44 26 30	60 21 45	59	58	.....	26	s. g.
816	July 7	44 19 00	60 40 45	60	57	.....	63	yl. s. p.
817	July 7	44 22 00	60 44 15	65	57	34.1	54	yl. s.
818	July 8	44 29 30	63 11 00	64	61	34.6	51	hrd.
819	July 8	44 30 30	63 19 00	65	61	.....	40	r.
820	July 11	43 12 00	64 00 30	60	58	37.8	54	hrd.
820	July 11	43 12 00	64 00 30	60	58	37.8	54	hrd.
821	July 12	43 01 00	64 45 30	60	60	38.7	47	hrd.
822	July 12	42 12 30	65 14 00	61	62	.....	100	g.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Cape Cod to Newfoundland.						
	1885.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
823	July 12	42 05 00	65 22 00	60	62	.....	74	crs. g.
824	July 13	41 58 00	65 30 00	60	62	.....	339	bu. m.
825	July 13	41 49 50	65 45 30	62	60	42.6	85	s. g.
826	July 13	41 49 30	65 45 30	63	60	.....	82	s. g.
827	July 13	41 49 00	65 45 30	63	60	42.3	81	s. g.
828	July 13	41 47 00	65 47 15	63	60	42.6	75	s. g.
829	July 13	41 44 30	65 47 00	63	60	45.2	79	stf. bu. c. g.
830	July 13	41 44 45	65 45 30	63	60	45.2	84	s. g.
831	July 13	41 42 45	65 45 45	63	60	.....	83	s. g.
832	July 13	41 42 00	65 45 30	65	66	.....	84	crs. s. g.
833	July 13	41 40 30	65 45 00	66	66	.....	278	wh. s. bk. sp.
834	July 13	41 42 30	65 44 15	66	66	.....	363	s. p.
835	July 13	41 55 10	65 44 00	64	60	41.6	129	crs. s. g.
836	July 13	41 55 50	65 42 30	64	60	.....	136	hrd.
837	July 13	41 56 25	65 41 00	64	60	.....	175	brk. sh.
838	July 13	41 57 00	65 39 40	66	61	.....	176	brk. sh.
839	July 13	41 58 00	65 37 30	66	61	.....	128	p.
		Nantucket to Charleston, S. C.						
840	Aug. 8	39 57 45	70 23 30	71	75	41.6	234	gn. s.
841	Aug. 8	40 00 45	70 24 00	71	75	46.2	154	gn. s. bk. sp.
842	Aug. 8	39 59 00	70 22 45	71	74	45.7	167	gn. s. bk. sp. brk. sh.
843	Aug. 8	39 56 15	70 21 30	71	72	41.9	233	gn. m. s.
844	Aug. 8	39 53 28	70 20 30	73	72	40.6	300	gn. m. s.
845	Aug. 8	39 56 00	70 20 45	70	76	41.6	237	gn. m.
846	Aug. 8	39 51 30	70 15 30	76	76	43.9	344	gn. m.
847	Aug. 8	39 52 30	70 21 00	70	74	39.6	416	stf. gn. m.
848	Aug. 9	39 54 15	70 29 00	71	76	41.6	315	hrd.
849	Aug. 9	39 49 00	70 42 00	71	77	39.6	452	gy. m.
850	Aug. 10	39 44 30	71 20 30	71	76	39.3	562	gn. m.
851	Aug. 10	39 47 15	71 24 30	71	76	39.6	397	gy. oz.
852	Aug. 10	39 49 40	71 27 30	69	74	40.6	298	gn. oz.
853	Aug. 10	39 52 00	71 30 30	72	75	43.6	206	gn. m.
854	Aug. 10	39 41 00	71 42 00	76	77	39.6	378	gn. s.
855	Aug. 31	38 45 00	68 04 00	72	75	36.4	1,949	lt. bu. glob. oz.
856	Sept. 1	39 44 00	67 03 00	71	72	36.8	2,009	gy. oz.
857	Sept. 3	40 52 30	65 07 00	63	71	.....	2,009	yl. glob. oz.
858	Sept. 18	39 47 00	71 39 45	68	70	.....	291	gn. m.
859	Sept. 19	39 04 00	72 23 00	71	72	38.5	659	gn. m.
860	Sept. 19	39 05 30	72 25 30	72	72	39	519	gn. m.
861	Sept. 20	39 04 00	72 16 00	70	72	(*a*)	877	
862	Sept. 20	39 05 30	72 20 00	70	62	38.7	715	gy. m.
863	Sept. 21	39 04 30	73 02 00	67	70	48.8	47	crs. gy. s. bk. sp.
864	Sept. 21	39 02 00	72 59 30	66	70	48.8	47	crs. gy. s. bk. sp.
865	Sept. 21	38 58 30	72 55 00	66	70	50.9	55	crs. dk. gy. s.
866	Oct. 17	35 02 00	75 09 30	70	79	.....	197	gy. m.
867	Oct. 18	34 38 00	75 32 00	75	78	46.7	210	gn. m.
868	Oct. 20	33 40 30	77 37 00	76	77	.....	15	fne. gy. s. brk. sh.
	1886.	*Bahama Islands.*						
869	Feb. 23	28 41 00	78 03 00	69	70	39.7	557	gy. s. bk. sp.
870	Feb. 23	28 40 00	77 52 00	71	68	39.7	570	gy. s. bk. sp.
871	Feb. 23	28 40 30	77 37 00	73	73	39.7	572	gy. s. bk. sp.
872	Feb. 23	28 41 30	77 28 00	86	74	39.7	581	gy. s. bk. sp.
873	Feb. 23	28 42 00	77 09 00	86	74	39.2	600	wh. s.
874	Feb. 23	28 42 30	76 53 30	71	70	39.2	623	gy. s. bk. sp.
875	Feb. 23	28 42 45	76 39 00	67	70	39.7	762	oz.
876	Feb. 23	28 43 00	76 26 55	70	70	36.8	2,845	oz.
877	Feb. 24	28 34 42	76 10 25	68	69	36.8	3,196	oz.
878	Feb. 24	28 24 06	76 15 55	69	71	37.8	1,407	No specimen.
879	Feb. 24	28 12 30	76 15 00	69	71	39.2	691	gy. s.
880	Feb. 24	28 01 00	76 13 00	69	71	39.2	622	yl. oz. gy. s.
881	Feb. 24	27 49 00	76 12 00	70	71	39.5	633	gy. and br. s.
882	Feb. 24	27 38 00	76 23 24	72	71	39.0	677	br. s.
883	Feb. 24	27 37 00	76 12 00	74	71	39.1	705	gy. and br. s.
884	Feb. 24	27 42 00	76 02 00	70	72	39.2	762	for.
885	Feb. 24	27 51 00	75 53 30	71	73	.....	2,599	No specimen.
886	Feb. 25	27 30 00	75 35 00	70	71	.....	2,761	No specimen.
887	Feb. 26	25 29 00	74 50 00	73	72	.....	2,589	for. oz.
888	Feb. 26	24 50 00	74 36 45	74	73	36.7	2,709	br. oz.
889	Feb. 26	24 25 00	74 36 00	76	75	37.6	2,639	br. oz.
890	Feb. 26	24 08 00	74 35 00	74	73	38.6	1,135	hrd.
891	Feb. 27	23 57 00	74 36 30	77	75	43.8	535	co.
892	Feb. 27	23 50 00	74 38 00	77	76	38.2	1,264	wh. s. co.
893	Feb. 27	23 43 00	74 39 30	79	77	38.2	1,263	lt. br. oz.
894	Mar. 8	23 37 20	74 57 40	78	75	39.1	850	co. s.

a Wire parted, losing thermometer and 800 turns of wire.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Bahamas to Cuba.						
	1886.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
895	Mar. 8	23 42 20	74 59 30	78	75	40.1	657	co. s.
896	Mar. 8	23 44 35	75 01 35	78	75	38.7	1,017	co. s.
897	Mar. 8	23 46 30	75 03 50	78	75	42.3	578	co. s.
898	Mar. 8	23 49 30	75 08 30	75	73	67.8	115	wh. co. s.
899	Mar. 8	23 55 20	75 11 20	74	75	39.2	845	co. s. bk. sp.
900	Mar. 8	24 01 20	75 13 30	73	75	39.5	741	wh. s. rd. and bk. sp. for.
901	Mar. 8	24 08 30	75 15 00	73	74	74.3	22	wh. s. sp. and brk. sh.
902	Mar. 8	24 09 00	75 06 00	72	74	37.2	2,194	br. m. co. s.
903	Mar. 8	24 08 00	74 56 30	72	74	36.7	2,482	br. oz.
904	Mar. 9	24 08 00	74 45 00	72	74	36.5	2,255	br. oz.
905	Mar. 9	24 07 00	74 38 00	72	74	36.7	2,061	br. oz.
906	Mar. 9	23 35 00	74 47 30	78	75	65.1	149	co. s. sh.
907	Mar. 10	23 37 00	75 06 30	71	74	38.4	1,398	co. s.
908	Mar. 10	23 46 30	75 13 45	72	74	38.2	1,338	co. s.
909	Mar. 10	23 43 45	75 20 45	72	74	48.3	448	co. s.
910	Mar. 10	23 50 30	75 23 30	69	73	38.5	1,047	co. s.
911	Mar. 10	23 56 30	75 26 30	68	73	38.3	1,211	co. s.
912	Mar. 10	24 02 45	75 29 00	69	73	54.3	361	co. s.
913	Mar. 10	24 06 30	75 30 45	70	73	n. t.	273	hrd. co. s.
914	Mar. 11	24 07 00	75 32 30	68	72	n. t.	515	co. s.
915	Mar. 11	24 01 15	75 38 45	67	72	38.6	1,051	co. s. bk. sp.
916	Mar. 11	23 55 20	75 45 10	68	73	38.6	1,056	co. s.
917	Mar. 11	23 49 30	75 51 40	68	73	39.1	974	co. s. bk. sp.
918	Mar. 11	23 43 30	75 58 00	69	73	68.3	124	co. s.
919	Mar. 11	23 52 00	76 00 15	67	73	39.1	863	gy. oz.
920	Mar. 11	24 00 40	76 02 45	66	73	38.6	967	wh. co. s.
921	Mar. 11	24 09 00	76 05 00	66	72	38.6	990	wh. co. s.
922	Mar. 11	24 17 20	76 07 30	66	72	38.6	1,002	wh. co. s.
923	Mar. 12	24 25.40	76 09 50	64	69	38.6	971	gy. oz.
924	Mar. 12	24 33 40	76 11 20	65	71	38.6	937	gy. oz.
925	Mar. 12	24 39 40	76 13 50	66	68	39.0	781	co. s.
926	Mar. 13	24 36 30	76 12 00	72	71	39.0	899	co. s.
927	Mar. 13	24 33 00	76 24 30	73	71	38.6	923	co. s.
928	Mar. 13	24 29 00	76 31 15	73	72	39.1	801	wh. oz.
929	Mar. 13	24 25 00	76 37 00	73	72	70.2	143	wh. oz.
930	Mar. 13	24 33 00	76 35 30	76	73	38.8	842	co. s.
931	Mar. 13	24 41 30	76 33 45	80	74	38.8	864	co. s.
932	Mar. 13	24 49 20	76 32 15	80	74	39.1	764	co. s.
933	Mar. 13	24 52 30	76 31 30	78	74	56.2	325	gy. oz.
934	Mar. 13	24 35 20	76 02 45	75	74	46.5	476	wh. oz.
935	Mar. 13	24 38 20	76 01 45	75	74	n. t.	926	wh. oz.
936	Mar. 13	24 46 50	75 55 45	74	73	36.7	1,965	gy. oz.
937	Mar. 14	24 54 30	75 49 20	75	73	36.7	2,432	br. oz.
938	Mar. 14	25 02 45	75 43 00	75	73	36.7	2,664	br. oz.
939	Mar. 14	25 35 00	76 35 15	71	72	n. t.	11	co. s.
940	Mar. 14	25 35 30	76 34 30	71	72	n. t.	14	co. s.
941	Mar. 14	25 36 30	76 34 45	71	72	n. t.	29	co. s. rd. sp.
942	Mar. 14	25 37 15	76 34 00	71	72	n. t.	139	hrd. co.
943	Mar. 14	25 40 15	76 29 15	73	72	38.1	1,927	co. s.
944	Mar. 14	25 44 45	76 23 15	72	72	36.7	2,663	br. oz.
945	Mar. 24	25 07 00	77 21 30	69	72	n. t.	375	co. s.
946	Mar. 24	25 15 30	77 24 45	71	73	38.4	1,409	br. oz. co.
947	Mar. 24	25 25 30	77 27 50	70	74	39.1	1,490	br. oz.
948	Mar. 24	25 35 30	77 27 45	69	74	39.1	1,079	hrd. co. s.
949	Mar. 24	25 47 00	77 20 30	68	74	38.6	1,164	hrd. co. s.
950	Mar. 24	25 53 15	77 33 00	65	71	38.4	1,312	gy. oz.
951	Mar. 25	25 59 00	78 12 00	66	71	49.8	411	gy. oz.
952	Mar. 25	26 04 00	78 29 00	69	74	51.8	383	br. and gy. oz.
953	Mar. 25	26 07 00	78 45 30	69	75	58.3	281	wh. oz.
954	Apr. 3	24 14 00	81 30 00	72	73	46.3	145	brk. sh.
955	Apr. 3	24 05 45	81 30 30	72	75	41.6	445	wh. oz.
956	Apr. 4	23 58 30	81 31 00	72	75	40.5	589	gy. s. yl. sp.
957	Apr. 4	23 51 00	81 31 45	73	76	39.9	980	gy. s. bk. sp.
958	Apr. 4	23 43 00	81 32 15	73	76	39.6	777	br. oz.
959	Apr. 4	23 35 30	81 32 45	74	76	39.6	815	lt. br. oz.
960	Apr. 4	23 28 00	81 33 15	74	77	39.6	792	lt. br. oz.
961	Apr. 4	23 20 30	81 33 45	73	77	40.6	707	br. oz.
962	Apr. 4	23 13 00	81 34 30	76	77	50.0	398	br. oz. sh.
963	Apr. 4	23 08 00	81 35 30	76	77	56.7	261	br. s. sh.
964	Apr. 10	26 21 00	78 50 45	68	76	48.4	443	wh. oz.
965	Apr. 10	26 27 00	78 38 00	70	74	60.6	290	br. s. brk. sh.
966	Apr. 10	26 25 30	78 27 50	70	73	40.7	528	br. s.
967	Apr. 10	26 31 30	78 21 00	70	73	53.0	367	yl. m.
968	Apr. 10	26 33 00	78 24 20	71	73	73.2	18	co. s.
969	Apr. 10	26 32 30	78 24 00	71	73	n. t.	148	co. s.
970	Apr. 10	26 36 30	78 18 30	71	73	74.7	18	co.
971	Apr. 10	26 38 30	78 14 00	71	74	62 3	274	co. lt. br. oz.
972	Apr. 10	26 39 00	78 09 00	72	74	67.2	157	gy. oz.
973	Apr. 10	26 38 45	78 00 00	71	73	n. t.	15	gy. s. fne. sh.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Bahama Islands.						
	1886.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
974	Apr. 10	26 34 00	77 58 45	71	73	63.8	234	gy. oz.
975	Apr. 10	26 22 00	78 08 00	70	73	39.6	867	wh. oz.
976	Apr. 10	26 16 00	77 55 00	69	73	39.6	711	br. oz.
977	Apr. 12	23 39 15	76 47 00	74	74	39.6	740	wh. oz.
978	Apr. 12	23 44 00	77 00 00	73	74	40.2	756	wh. oz.
979	Apr. 13	23 49 00	77 13 00	73	74	39.4	769	wh. oz.
980	Apr. 13	23 50 00	77 25 30	73	73	39.6	740	lt. br. oz.
981	Apr. 13	23 58 00	77 20 00	73	73	39.4	805	lt. br. oz.
982	Apr. 13	23 57 00	77 12 15	73	73	40.4	514	lt. br. oz.
983	Apr. 13	24 07 00	77 21 00	82	74	57.3	809	wh. oz.
984	Apr. 13	24 13 00	77 30 30	78	74	39.4	822	lt. br. oz.
985	Apr. 13	24 19 30	77 24 30	70	74	47.6	852	lt. br. oz.
986	Apr. 13	24 25 00	77 18 15	74	74	59.8	639	wh. m.
987	Apr. 14	24 29 30	77 19 00	72	73	45.7	444	wh. m.
988	Apr. 14	24 37 00	77 30 00	80	73	39.1	939	co. m.
989	Apr. 14	24 43 00	77 42 00	76	74	39.6	734	lt. br. oz.
990	Apr. 14	25 19 30	77 57 30	71	73	38.6	959	lt. br. oz.
991	Apr. 15	25 11 00	77 47 30	69	73	40.7	1,195	lt. br. glcb. oz.
992	Apr. 15	25 02 30	77 40 00	74	73	39.8	1,084	yl. m.
993	Apr. 17	25 06 00	77 32 00	72	73	39.4	794	co. s.
994	Apr. 30	25 35 45	76 57 00	79	76	44.2	1,527	lt. br. oz.
995	Apr. 30	25 39 30	76 53 45	79	76	36.9	1,922	wh. co. oz.
996	Apr. 30	25 43 00	76 58 00	79	76	39.1	2,222	br. oz.
997	Apr. 30	25 47 00	77 03 00	77	76	37.0	1,773	gy. s. bk. sp.
998	Apr. 30	25 50 45	77 09 00	77	76	-------	11½	No specimen.
999	May 1	26 40 00	76 49 30	75	77	39.1	942	brk. sh.
1000	May 1	26 43 00	76 38 30	75	77	36.8	2,800	br. oz.
1001	May 1	26 45 00	76 26 00	77	76	38.1	2,764	gy. co. s.
1002	May 1	26 47 00	76 15 00	76	74	38.4	2,693	br. co. s.
1003	May 1	26 50 00	76 04 45	76	74	38.1	2,670	br. oz.
1004	May 1	27 11 00	76 19 00	76	73	38.1	2,715	co. s. for.
1005	May 2	27 41 00	76 41 00	69	72	38.6	943	gy. oz. bk. sp.
1006	May 2	27 45 00	76 52 30	69	72	41.1	671	yl. oz. bk. sp.
1007	May 2	27 49 00	77 04 00	69	72	41.1	690	yl. oz. bk. sp.
1008	May 2	27 53 00	77 16 00	71	73	39.9	669	yl. oz. bk. sp.
1009	May 2	27 49 30	77 35 00	72	73	-------	661	co. s. for.
1010	May 2	27 42 30	77 45 00	74	74	40.5	663	lt. br. oz.
1011	May 2	27 35 45	77 51 00	74	74	-------	682	Wire parted, lost 400 turns, thermometer, and lead.
1012	May 2	27 27 00	77 59 00	74	74	40.8	610	wh. s.
1013	May 5	31 27 00	79 12 00	76	77	50.2	280	crs. gy. s.
		New York to Newfoundland.						
1014	July 18	39 57 00	71 24 45	72	71	53.1	58	br. s. sh.
1015	July 18	39 54 00	71 24 00	72	71	51.0	119	gn. m.
1016	July 18	39 50 00	71 20 30	72	71	43.1	226	gn. m.
1017	Aug. 3	40 14 00	65 56 00	68	75	36.7	2,224	br. oz. c.
1018	Aug. 3	40 15 00	65 35 00	68	74	36.2	2,951	br. oz.
1019	Aug. 4	40 20 00	64 54 00	68	73	37.3	2,575	gy. and br. oz.
1020	Aug. 4	40 52 24	63 53 00	67	73	-------	2,337	lt. br. oz.
1021	Aug. 4	41 29 28	63 27 30	70	66	37.5	1,919	lt. br. oz.
1022	Aug. 4	41 29 28	63 21 00	69	64	37.7	1,932	lt. br. oz.
1023	Aug. 4	41 29 28	63 17 00	68	64	37.3	1,969	lt. br. oz.
1024	Aug. 4	41 29 28	63 10 15	69	64	37.3	1,980	lt. br. oz.
1025	Aug. 4	41 29 28	63 05 15	65	66	-------	1,996	lt. br. oz.
1026	Aug. 4	41 25 30	63 08 00	65	66	36.2	2,025	lt. br. oz.
1027	Aug. 4	41 24 00	63 19 00	66	65	36.3	2,033	lt. br. oz.
1028	Aug. 5	41 22 20	63 29 30	65	66	36.2	2,054	lt. br. oz.
1029	Aug. 5	41 31 00	63 27 30	65	66	36.2	1,930	lt. br. oz.
1030	Aug. 5	41 30 30	63 15 00	64	63	36.2	1,978	lt. br. oz.
1031	Aug. 5	41 32 30	63 00 30	62	64	36.3	2,033	lt. br. oz.
1032	Aug. 5	41 29 30	62 47 30	62	64	36.2	2,069	lt. br. oz.
1033	Aug. 5	41 53 00	62 35 15	67	67	-------	1,768	No specimen.
1034	Aug. 5	42 21 00	62 18 00	69	66	38.2	1,138	br. oz.
1035	Aug. 5	42 43 00	62 03 00	67	64	40.8	231	gy. s. bk. sp.
1036	Aug. 6	43 30 00	57 40 00	64	62	37.2	1,731	lt. br. oz.
1037	Aug. 7	43 45 00	56 09 00	62	62	37.2	1,758	stk. br. m.
1038	Aug. 7	44 02 00	54 39 00	66	64	36.9	1,780	lt. gy. m.
1039	Aug. 7	44 13 00	53 47 00	63	63	37.7	1,172	br. oz.
1040	Aug. 8	44 23 00	52 42 00	61	62	31.9	81	for. bk. sp.
1041	Aug. 8	44 52 00	50 25 24	62	62	39.7	34	rd. s. bk. sp.
1042	Aug. 8	45 00 00	49 15 00	60	62	31.1	35	wh. s. brk. sh.
1043	Aug. 8	45 00 00	49 09 00	60	62	31.0	35	hrd.
1044	Aug. 8	45 00 00	49 03 00	57	59	30.9	35	wh. s.
1045	Aug. 8	45 00 00	48 57 00	57	58	31.4	38	p.
1046	Aug. 8	45 00 00	48 51 00	57	58	30.4	41	p. wh. s. brk. sh.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		New York to Newfoundland.						
	1886.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
1047	Aug. 8	45 00 30	48 45 00	57	56	31.9	115	crs. wh. s. brk. sh.
1048	Aug. 8	45 02 00	48 20 00	57	56	37.8	1,169	lt. br. oz.
1049	Aug. 9	45 02 00	47 08 00	62	59	38.2	1,916	lt. br. oz.
1050	Aug. 9	45 02 00	45 58 00	65	62	36.3	1,981	br. oz.
1051	Aug. 9	45 04 00	44 38 00	65	63	36.2	2,549	br. oz.
1052	Aug. 10	45 06 00	43 23 30	67	68	36.8	2,621	lt. br. oz.
1053	Aug. 10	45 14 00	42 03 00	69	70	37.8	2,658	br. oz. for.
1054	Aug. 10	45 43 00	43 00 00	69	68	36.8	2,577	lt. br. oz.
1055	Aug. 11	46 21 00	43 47 00	57	60	37.3	2,135	s. g.
1056	Aug. 11	47 02 30	45 06 30	59	58	38.2	103	hrd.
1057	Aug. 11	47 14 00	45 31 30	58	57	39.7	155	wh. s. bk. sp.
1058	Aug. 12	47 27 00	46 11 30	56	57	38.7	423	br. oz.
1059	Aug. 12	47 32 12	46 53 30	53	49	----	477	No specimen.
1060	Aug. 12	47 44 00	48 12 30	55	50	37.1	170	gy. s. p.
1061	Aug. 12	47 46 00	48 19 30	55	51	36.5	168	gy. s. bk. sp.
1062	Aug. 12	47 49 00	48 41 30	54	51	35.2	147	gy. s. bk. sp. brk. sh.
1063	Aug 13	47 57 00	49 24 30	54	52	32.4	106	gy. s. bk. sp.
1064	Aug. 13	48 02 00	50 10 30	55	53	30.4	100	gy. m.
1065	Aug. 13	47 31 00	50 17 00	56	54	30.1	62	gy. s. bk. sp. p.
1066	Aug. 13	47 26 00	51 00 30	57	54	-------	74	fne. gy. s. bk. sp.
1067	Aug. 13	47 30 00	51 45 00	55	55	-------	98	gn. m.
1068	Aug. 22	44 40 00	56 43 30	60	58	40.4	226	gy. m.
1069	Aug. 22	44 31 00	57 09 00	60	58	33.7	38	gy. s. p.
1070	Aug. 23	44 25 00	57 35 00	63	59	-------	32	wh. s. bk. sp.
1071	Aug. 23	43 38 00	59 18 30	67	62	35.6	63	gy. s. bk. sp.
1072	Aug. 25	41 37 00	62 58 00	63	65	36.9	1,943	dk. br. oz.
1073	Aug. 25	41 37 00	63 05 00	63	68	36.7	1,854	dk. br. oz.
1074	Aug. 25	41 37 00	63 11 30	63	65	37.2	1,798	dk. br. oz.
1075	Aug. 25	41 37 00	63 18 00	64	65	37.1	1,779	dk. br. oz.
1076	Aug. 25	41 37 00	63 26 00	70	73	36.9	1,762	dk. br. oz.
1077	Aug. 25	41 37 00	63 34 00	70	73	36.9	1,741	dk. br. oz.
1078	Aug. 25	41 42 00	63 34 00	70	72	37.2	1,644	dk. br. oz.
1079	Aug. 25	41 42 00	63 27 00	70	72	36.9	1,693	dk. br. oz.
1080	Aug. 25	41 42 00	63 21 00	70	72	36.9	1,697	dk. br. oz.
1081	Aug. 25	41 42 00	63 14 30	70	71	37.5	1,713	lt. br. oz. for.
1082	Aug. 26	41 49 00	63 50 00	73	73	37.5	1,587	br. oz. gy. m.
1083	Aug. 26	41 42 00	63 47 30	74	73	37.2	1,620	br. oz. for.
1084	Aug. 26	41 37 00	63 45 00	74	74	37.2	1,699	br. oz. for.
1085	Aug. 26	41 32 00	63 43 00	74	74	36.7	1,805	br. oz. for.
1086	Aug. 26	41 26 00	63 40 45	74	73	36.7	1,910	br. oz. for.
1087	Aug. 26	41 27 00	63 51 30	70	73	36.7	1,880	lt. br. oz.
1088	Aug. 27	41 27 00	64 22 30	67	72	36.7	1,879	lt. br. oz. for.
1089	Aug. 27	41 28 00	64 51 30	68	72	-------	1,696	No specimen.
	1887.	*Off Virginia.*						
1090	Sept. 17	37 37 00	74 11 00	64	70	39.5	352	hrd.
1091	Sept. 18	38 31 00	73 15 00	62	68	41	255	gy. s.
		Off Atlantic coast, South America.						
1092	Dec. 6	9 47 00	55 51 00	85	82	36.5	2,069	br. glob. oz.
1093	Dec. 8	6 25 00	50 29 30	82	80	37.5	2,406	br. glob. oz.
1094	Dec. 9	5 01 00	46 44 00	80	80	-------	1,876	No specimen.
1095	Dec. 11	1 53 00	43 00 00	82	80	-------	2,449	glob. oz.
		Lat. S.						
1096	Dec. 15	4 38 00	35 55 00	78	79	37.9	1,263	co.
1097	Dec. 17	10 10 00	35 32 00	81	79	37.9	1,276	br. co.
1098	Dec. 31	24 40 00	43 45 00	75	75	38.9	889	br. glob. oz.
1099	Dec. 31	25 24 00	44 14 00	75	75	38.9	1,061	Pter. oz.
1100	Dec. 31	25 45 00	44 38 00	78	75	38.9	1,099	br. glob. oz.
1101	Dec. 31	25 51 00	44 48 00	78	75	38.9	1,019	br. glob. oz.
1102	Dec. 31	25 41 00	44 48 00	78	76	38.4	945	br. glob. oz.
1103	Dec. 31	25 42 00	44 58 30	78	76	37.9	777	br. glob. oz.
1104	Dec. 31	26 23 00	45 31 30	77	76	37.9	756	br. glob. oz.
	1888.							
1105	Jan. 2	31 05 00	49 45 00	82	76	-------	78	s. and brk. sh.
1106	Jan. 3	32 51 00	51 48 00	71	71	-------	24	s. and g.
1107	Jan. 3	33 17 00	52 19 00	72	71	-------	11	gy. s.
1108	Jan. 3	33 46 10	52 45 00	72	70	-------	14	gy. s.
1109	Jan. 3	33 55 00	52 53 00	70	70	-------	14	fne. dk. s.
1110	Jan. 3	34 01 00	53 00 00	68	70	-------	11½	fne. dk. s.
1111	Jan. 3	34 09 00	53 08 00	67	70	-------	13	fne. dk. s.
1112	Jan. 12	36 56 00	56 23 00	69	68	-------	12	s. brk. sh.
		Pacific coast, South America.						
		Lat. N.						
1113	Mar. 31	6 44 00	80 27 00	77	77	35.9	1,927	gn. m.
1114	Apr. 1	5 16 00	83 09 00	80	79	36.9	1,729	gn. m.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Pacific coast, South America.						
	1888.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
1115	Apr. 1	4 18 00	85 14 00	82	82	35.9	1,882	dk. br. m. and for.
1116	Apr. 2	4 14 00	85 11 00	83	83	35.9	1,657	dk. br. m. and for.
1117	Apr. 2	4 02 00	85 25 30	81	80	35.9	1,724	gy. glob. oz.
1118	Apr. 2	2 53 00	86 24 00	84	83	35.9	1,616	br. glob. oz.
1119	Apr. 3	1 13 00 Lat. S.	88 02 00	80	80	35.9	1,341	br. glob. oz.
1120	Apr. 7	1 08 00	89 39 00	80	78	--------	287	hrd.
1121	Apr. 7	1 23 00	89 58 00	78	80	45.9	286	gy. s. bk. sp.
1122	Apr. 8	1 25 00	90 07 00	80	79	53.9	191	fne. gy. s.
1123	Apr. 13	00 53 00	90 15 30	81	79	58.1	108	wh. s.
1124	Apr. 14	00 53 30	90 05 30	80	78	56.2	139	wh. co. s.
1125	Apr. 14	00 51 00 Lat. N.	89 43 30	79	78	45.6	329	fne. gy. s.
1126	Apr. 17	4 44 00	93 02 00	83	83	35.9	1,976	rd. br. oz.
		Off Central America and Mexico.						
1127	Apr. 19	8 26 00	95 30 00	83	81	35.9	1,997	gn. m.
1128	Apr. 20	11 45 00	97 03 00	84	84	35.9	2,256	gn. m.
1129	Apr. 21	14 33 00	98 14 00	87	75	35.9	1,862	gn. m.
		Off Alaska.						
1130	July 19	52 15 00	156 37 00	51	51	34.9	2,550	br. oz.
1131	July 19	52 12 00	158 20 00	51	49	--------	2,581	Wire carried away.
1132	July 19	52 15 00	160 00 00	50	48	35	2,558	gy. oz. p.
1133	July 20	52 15 00	161 40 30	51	50	--------	2,573	Wire carried away.
1134	July 20	52 17 00	162 48 00	55	51	35.2	2,678	gy. oz.
1135	July 20	52 18 00	163 54 00	54	50	35.2	2,848	gy. oz.
1136	July 20	52 20 00	165 00 00	52	50	35.7	3,820	gy. oz.
1137	July 21	52 20 00	166 05 00	55	50	35.2	2,654	gy. oz.
1138	July 21	52 40 00	166 35 00	52	51	35.2	2,267	gy. oz.
1139	July 21	52 53 00	166 44 00	52	50	35.2	1,961	gy. oz.
1140	July 21	53 05 00	166 49 00	53	50	41.2	169	bk. s.
1141	July 21	53 11 00	166 51 00	52	50	40.6	84	bk. s. p.
1142	July 21	53 17 00	166 54 00	54	50	--------	57	s. bk. sp.
1143	July 21	53 22 00	166 55 30	54	50	42.7	41	s. bk. sp.
1144	July 21	53 23 00	166 56 00	54	50	42.2	28	s. bk. sp.
1145	July 21	53 19 00	166 50 00	51.5	48	41.7	55	bk. s. p.
1146	July 21	53 17 00	166 42 00	51	48	41.2	58	gy. s.
1147	July 21	53 15 00	166 35 00	51	48	41.2	83	bk. s.
1148	July 21	53 13 00	166 27 00	51	49	41.2	174	bk. s.
1149	July 21	53 16 00	166 10 00	51	49	39.5	228	bk. s.
1150	July 22	53 25 00	166 02 30	51	49	41.2	94	crs. bk. s.
1151	July 22	53 27 00	165 46 00	51	49	41.2	113	crs. bk. s. p.
1152	July 22	53 30 00	165 30 00	51	49	39.7	261	gr. m.
1153	July 22	53 37 00	165 18 30	50	48	40.7	99	gy. s. p.
1154	July 22	53 39 00	165 04 00	50	48	41.2	133	fne. gy. s.
1155	July 22	53 42 00	164 46 00	50	49	40.2	163	bk. s.
1156	July 22	55 48 00	164 32 00	59	49	40.2	66	bk. s. g.
1157	July 22	53 43 00	164 38 00	52	49	40.7	111	bk. s. sh.
1158	July 22	53 43 00	164 31 00	52	50	40.7	73	bk. s. fne. g.
1159	July 22	53 39 00	164 34 00	52	50	40.2	185	lt. s.
1160	July 22	53 39 00	164 26 00	52	50	40.1	211	gy. s. bk. sp.
1161	July 22	53 41 30	164 20 00	52	50	40.5	89	bk. s.
1162	July 22	53 43 00	164 13 00	52	50	40.4	68	gy. s. bk. sp. p.
1163	July 22	53 42 30	164 05 00	51	49	40.4	63	gy. s. bk. sp.
1164	July 22	53 42 00	163 57 30	51	49	40.2	95	gr. m.
1165	July 22	53 51 00	163 51 00	51	49	40.2	43	bk. s.
1166	July 22	54 00 00	163 45 00	51	50	41.7	45	fne. gy. s.
1167	July 22	54 09 00	163 41 00	51	50	41.2	45	bk. s. bk. sp.
1168	July 22	54 13 00	164 02 00	51	49	39.2	51	r. fne. g.
1169	July 23	54 16 00	164 23 00	52	49	41.2	56	gy. s. bk. sp.
1170	July 23	54 18 00	164 38 00	52	50	42.2	45	gy. s. bk. sp.
1171	July 23	54 20 00	164 49 00	51	48	43.9	30	g.
1172	July 23	54 22 00	165 00 00	51	48	45.2	42	crs. bk. s. g.
1173	July 23	54 23 00	165 09 00	50	45	42.2	72	crs. bk. s.
1174	July 23	54 25 00	165 19 00	50	45	40.7	80	bk. s.
1175	July 23	54 24 00	165 25 00	50	45	40.2	85	bk. s. g.
1176	July 23	54 22 00	165 34 30	48	44	40.7	73	bk. s. g.
1177	July 23	54 21 00	165 41 00	51	45	41 2	51	bk. s. g.
1178	July 23	54 19 00	165 49 00	51	45	41.2	53	p.
1179	July 28	53 56 00	166 07 00	48	49	44.4	36	bk. s. brk. sh.
1180	July 28	53 56 00	165 48 00	52	46	43.2	51	brk. sh. g.
1181	July 28	53 55 30	165 22 00	51	48	41.2	57	bk. s.
1182	July 28	53 55 00	165 05 30	52	52	43.2	53	bk. s. g.
1183	July 28	54 00 00	164 51 00	51	51	44.2	59	brk. sh. p.
1184	July 28	53 58 00	164 39 00	49	50	41.2	61	gy. s. g.
1185	July 28	53 55 00	164 22 00	50	50	40 2	50	crs. bk. s.
1186	July 29	53 53 00	164 05 00	51	50	41.2	45	gy. s.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off Alaska.						
	1888.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
1187	July 29	53 49 00	163 40 00	51	50	39.2	342	bk. s.
1188	July 29	54 00 00	163 37 00	52	51	41.2	62	bk. s.
1189	July 29	54 01 00	163 45 00	52	51	40.2	49	bk. s.
1190	July 29	54 02 00	163 53 30	52	51	41.7	48	bk. s.
1191	July 29	54 04 00	164 01 00	52	51	42.2	46	bk. s.
1192	July 29	54 06 00	164 17 00	53	51	43.2	41	bk. s. g.
1193	July 29	54 08 00	164 25 00	53	51	42.2	52	bk. s.
1194	July 29	54 09 00	164 33 00	52	50	41.2	52	bk. s. g.
1195	July 29	54 10 00	164 42 00	51	50	41.2	49	brk. sh.
1196	July 29	54 11 00	164 48 00	51	50	43.2	52	rky.
1197	July 29	54 15 00	164 41 00	50	51	40.7	71	crs. bk. s.
1198	July 29	54 25 00	164 21 00	52	51	40.6	63	r. bk. s.
1199	July 29	54 22 00	164 01 00	51	49	41.2	55	bk. s.
1200	July 29	54 20 00	163 41 00	51	49	40.2	72	bk. s.
1201	July 29	54 18 00	163 21 00	51	50	40.2	44	bk. s. g.
1202	July 29	54 18 00	163 18 00	51	50	42.2	32	rky.
1202*a*	July 29	54 16 00	163 19 30	51	50	-------	28	No specimen.
1202*b*	July 29	54 15 00	163 21 00	51	50	-------	25	No specimen.
1203	July 30	54 14 00	163 21 30	51	50	40.2	39	gy. s. bk. sp.
1204	July 30	54 10 00	163 24 00	51	51	42.3	42	gy. s. bk. sp.
1205	July 30	54 09 00	163 14 00	50	50	42.2	44	bk. s. g.
1206	July 30	54 09 00	163 04 00	51	50	42.2	43	g.
1207	July 30	54 09 00	162 58 00	51	50	-------	43	bk. s.
1208	July 30	54 08 00	162 54 00	51	50	42.2	41	gy. s. bk. sp.
1209	July 30	54 03 00	162 43 00	51	50	41.2	51	g.
1210	July 30	53 58 00	162 42 00	51	50	42.2	464	rky.
1211	July 30	54 03 00	162 33 00	51	50	39.2	265	rky.
1212	July 30	54 08 00	162 22 00	51	50	40.2	60	crs. s. p.
1213	July 30	54 12 00	162 17 00	51	50	42.2	47	bk. s. fne. g.
1214	July 30	54 09 00	162 10 00	51	51	40.2	67	rky.
1215	July 30	54 12 00	162 02 00	51	50	41.2	51	rky. fne. g.
1216	July 30	54 16 00	161 53 00	51	50	42.2	37	rky.
1217	July 30	54 20 00	161 46 00	51	50	40.7	38	p.
1218	July 30	54 26 00	161 45 00	52	50	39.8	80	gr. m.
1219	July 30	54 31 00	161 44 00	52	50	40.2	82	gr. m.
1220	July 30	54 34 00	161 48 00	52	50	41.2	58	rky.
1221	July 30	54 27 00	161 53 00	51	49	40.2	81	gr. m.
1222	July 30	54 32 00	161 39 00	51	49	40.2	81	rky.
1223	July 30	54 37 00	161 27 00	51	49	41.7	59	bk. s.
1224	July 31	54 42 00	161 13 00	51	49	42.2	64	bk. s.
1225	July 31	54 47 00	161 00 00	51	49	42.2	47	bk. s. g.
1226	July 31	54 51 00	160 47 00	51	49	-------	45	gy. s. p.
1227	July 31	54 56 00	160 33 00	51	50	41.8	52	gy. s.
1228	July 31	54 59 00	160 26 00	51	51	41.7	60	gy. s.
1229	Aug. 2	55 08 00	160 05 00	51	49	40.9	18	fne. gy. s.
1230	Aug. 3	55 04 00	160 26 00	58	51	45.7	34	brk. sh.
1231	Aug. 3	55 05 00	160 42 00	54	51	44.2	38	rky.
1232	Aug. 3	55 00 00	160 56 00	53	52	40.2	71	dk. m.
1233	Aug. 3	54 52 00	161 17 00	54	51	41.7	74	dk. m.
1234	Aug. 3	54 47 00	161 26 00	54	51	43.2	41	rky.
1235	Aug. 3	54 44 00	161 27 00	52	51	-------	45	rky.
1236	Aug. 3	54 38 00	161 39 00	52	51	43.2	49	bk. s. g.
1237	Aug. 3	54 32 00	161 53 00	52	51	41.2	75	bk. s.
1238	Aug. 3	54 25 00	162 05 00	52	51	40.2	63	bk. s.
1239	Aug. 3	54 23 00	161 56 00	51	51	43.5	34	p.
1240	Aug. 3	54 20 00	162 02 00	51	50	43	30	sh.
1241	Aug. 3	54 16 00	162 08 00	52	50	42.2	40	brk. sh. g.
1242	Aug. 3	54 07 00	162 07 00	51	50	38.2	435	dk. m.
1243	Aug. 3	54 10 00	161 54 00	52	50	39.7	52	rky.
1244	Aug. 3	54 13 00	161 47 00	52	51	40.2	50	bk. s. p.
1245	Aug. 3	54 17 00	161 40 00	52	51	41.7	44	crs. s.
1246	Aug. 3	54 18 00	161 34 00	52	51	42.2	42	s. r.
1247	Aug. 4	54 22 00	161 22 00	52	51	41.2	61	r. g.
1248	Aug. 4	54 27 00	161 08 00	52	50	41.2	59	bk. s.
1249	Aug. 4	54 31 00	160 54 00	52	50	40.2	71	bk. s.
1250	Aug. 4	54 35 00	160 41 00	52	51	40.2	72	bu. m.
1251	Aug. 4	54 39 00	160 28 00	52	50	40.4	62	gy. s. p.
1252	Aug. 4	54 43 00	160 14 00	53	51	40.6	50	fne. gy. s.
1253	Aug. 4	54 47 00	160 00 00	53	51	42.2	43	gy. s. bk. sp.
1254	Aug. 4	54 49 00	159 54 00	53	51	43.7	40	fne. gy. s.
1255	Aug. 4	54 57 00	159 55 00	51	50	48.3	25	gy. s.
1256	Aug. 4	55 00 00	159 54 00	51	50	45.2	27	rky.
1257	Aug. 4	54 59 00	159 45 00	51	50	45.2	26	bk. s. p.
1258	Aug. 4	55 02 00	159 41 00	53	50	44.7	37	gy. s. brk. sh.
1259	Aug. 4	55 06 00	159 39 00	53	48	44.2	57	s. brk. sh.
1260	Aug. 4	55 10 00	159 40 00	53	48	44.2	39	s. brk. sh.
1261	Aug. 4	55 15 00	159 28 00	53	48	42.0	23	r. c.
1262	Aug. 5	55 03 00	159 15 00	51	49	45.7	27	brk. sh.
1263	Aug. 5	55 01 00	159 08 00	51	49	43.2	44	g.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off Alaska.						
	1888.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
1264	Aug. 5	54 59 00	159 00 00	51	49	42.2	48	gy. s.
1265	Aug. 5	54 57 00	158 52 00	51	49	42.2	43	gy. s. g.
1266	Aug. 5	54 55 00	158 46 00	51	49	42.2	46	gy. s. brk. sh.
1267	Aug. 5	54 53 00	158 38 00	52	51	40.2	70	gy. s.
1268	Aug. 5	54 49 00	158 42 00	51	51	40.9	56	gy. s. p.
1269	Aug. 5	54 51 00	158 49 00	51	51	42.2	46	gy. s. brk. sh.
1270	Aug. 5	54 52 00	158 54 00	51	51	-------	45	rky.
1271	Aug. 5	54 53 00	158 57 00	51	51	42.7	41	s. r.
1272	Aug. 5	54 54 00	159 01 00	51	52	-------	45	rky.
1273	Aug. 5	54 55 00	159 05 00	52	52	43.2	35	rky.
1274	Aug. 5	54 52 00	159 07 00	52	52	-------	38	gy. s. p. brk. sh.
1275	Aug. 5	54 50 00	159 08 30	52	52	44.2	35	rky.
1276	Aug. 5	54 49 00	159 05 00	52	52	-------	57	rky.
1277	Aug. 5	54 48 00	159 01 00	52	52	43.2	44	sh. fne. g.
1278	Aug. 5	54 47 00	158 55 00	54	51	42.2	47	r. sh.
1279	Aug. 5	54 46 00	158 53 00	54	51	42.5	49	r.
1280	Aug. 5	54 44 00	158 44 00	54	51	41.7	55	rky.
1281	Aug. 5	54 35 00	158 51 00	54	51	40.7	99	bu. m. p.
1282	Aug. 5	54 37 00	158 58 00	54	51	40.2	69	gy. s. p.
1283	Aug. 5	54 38 00	159 02 00	53	51	41.3	56	gy. s. p.
1284	Aug. 5	54 39 00	159 09 00	53	51	42.5	46	p.
1285	Aug. 5	54 41 00	159 16 00	53	51	43.2	41	gy. s. sh.
1286	Aug. 5	54 42 00	159 24 00	51	49	44.2	35	rky.
1287	Aug. 5	54 41 00	159 29 30	51	49	44.2	35	rky.
1288	Aug. 5	54 37 00	159 25 00	51	49	-------	43	rky.
1289	Aug. 5	54 32 00	159 17 00	51	51	-------	115	rky.
1290	Aug. 5	54 25 00	159 40 00	50	50	41.2	105	bk. s.
1291	Aug. 6	54 36 00	159 39 00	50	51	42.4	49	bk. s.
1292	Aug. 6	54 41 00	159 39 00	50	51	43.0	42	p.
1293	Aug. 6	54 42 00	159 47 00	50	51	43.2	44	r.
1294	Aug. 6	54 37 00	159 52 00	50	51	42.2	49	r. gy. s.
1295	Aug. 6	54 28 00	160 00 00	50	51	40.6	67	p.
1296	Aug. 6	54 25 00	160 03 00	50	51	41.2	119	fne. gy. s.
1297	Aug. 6	54 39 00	158 43 00	58	51	41.2	52	rky.
1298	Aug. 6	54 40 00	158 35 00	55	51	40.7	57	rky.
1299	Aug. 6	54 41 00	158 25 00	54	53	41.2	86	p.
1300	Aug. 6	54 46 00	158 22 00	54	53	41.2	110	gy. s.
1301	Aug. 6	54 50 00	158 30 00	54	53	41.2	87	gy. s.
1302	Aug. 6	54 56 00	158 30 00	55	53	40.4	90	g.
1303	Aug. 6	55 01 00	158 30 00	53	53	40.6	114	gr. m.
1304	Aug. 6	55 03 00	158 38 00	53	52	39.9	87	g.
1305	Aug. 6	55 04 00	158 48 00	53	52	40.4	79	gy. s.
1306	Aug. 6	55 07 00	158 55 00	51	50	41.5	50	gy. s.
1307	Aug. 6	55 09 00	159 03 00	51	50	41.9	47	gy. s. p.
1308	Aug. 6	55 11 00	159 11 00	52	51	43.2	53	gy. s.
1309	Aug. 6	55 13 00	159 18 00	51	51	42.2	58	gy. s.
1310	Aug. 6	55 17 00	159 19 00	51	51	40.4	102	bu. m.
1311	Aug. 6	55 18 00	159 02 00	51	51	40.2	103	bm. m.
1312	Aug. 7	55 20 00	158 45 00	51	51	41.2	97	gy. s.
1313	Aug. 7	55 21 00	158 29 00	50	52	40.2	80	gy. s.
1314	Aug. 7	55 22 00	158 12 00	50	52	-------	68	m.
1315	Aug. 7	55 23 00	157 55 00	50	50	42.1	56	g. brk. sh.
1316	Aug. 7	55 25 00	157 37 00	51	50	42.0	46	yl. s.
1317	Aug. 7	55 26 00	157 28 00	51	50	42.1	47	gn. m.
1318	Aug. 7	55 30 00	157 44 00	50	50	41.9	53	gy. s. g.
1319	Aug. 7	55 34 00	158 00 00	51	51	40.1	73	fne. gy. s.
1320	Aug. 7	55 39 00	158 14 00	51	51	42.1	73	m. fne. gy. s.
1321	Aug. 7	55 47 00	158 27 00	51	51	41.9	64	fne. gy. s.
1322	Aug. 7	55 54 00	158 40 00	53	51	43.1	68	bu. m.
1323	Aug. 7	55 57 00	158 47 00	53	52	42.1	82	bu. m.
1324	Aug. 8	55 52 00	158 29 00	52	50	42.1	67	fne. gy. s.
1325	Aug. 8	55 49 00	158 12 00	53	51	43.3	44	sh. g.
1326	Aug. 8	55 47 00	157 55 00	53	51	44.3	57	gy. s.
1327	Aug. 8	55 45 00	157 39 00	54	53	41.3	67	fne. bk. s.
1328	Aug. 8	55 44 00	157 30 00	54	53	41.5	59	br. s.
1329	Aug. 8	55 42 00	157 24 00	54	53	-------	54	rky.
1330	Aug. 8	55 41 00	157 24 00	54	53	-------	49	br. s. g.
1331	Aug. 8	55 40 00	157 16 00	56	52	43.9	48	bk. s. g.
1332	Aug. 8	55 39 00	157 07 00	56	52	45.1	47	crs. gy. s.
1333	Aug. 8	55 37 00	156 57 00	54	51	42.9	50	gy. s.
1334	Aug. 8	55 36 00	156 47 00	53	52	41.7	55	fne. gy. s.
1335	Aug. 8	55 34 00	156 30 00	53	52	41.1	135	gn. m.
1336	Aug. 8	55 44 00	156 19 00	54	52	41.1	137	bu. m.
1337	Aug. 8	55 53 00	156 06 00	54	52	41.3	119	bu. m.
1338	Aug. 9	55 46 00	155 55 00	53	50	41.1	89	p.
1339	Aug. 9	55 39 00	155 44 00	52	50	42.6	60	rky.
1340	Aug. 9	55 32 00	155 32 00	52	50	42.1	96	gy. sp.
1341	Aug. 9	55 39 00	155 27 00	52	50	46.1	57	gy. s.
1342	Aug. 9	55 47 00	155 22 00	52	50	48.2	26	gy. s.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off Alaska.						
	1888.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
1343	Aug. 9	55 49 00	155 20 00	52	50	48.0	27	gy. s. brk. sp.
1344	Aug. 9	55 44 00	155 14 00	50	48	41.9	76	gy. s.
1345	Aug. 9	55 39 00	155 09 00	50	48	38.9	287	gy. s.
1346	Aug. 9	55 47 00	155 00 00	52	52	41.6	89	gy. s.
1347	Aug. 9	55 55 00	154 51 00	55	54	41.3	81	fne. br. s.
1348	Aug. 9	55 59 00	154 47 00	58	54	42.5	76	fne. gy. s.
1349	Aug. 9	56 04 00	154 44 00	58	54	41.5	60	fne. gy. s.
1350	Aug. 9	56 07 00	154 38 00	58	54	42.5	37	gy. s.
1351	Aug. 9	56 05 00	154 33 00	55	55	41.6	61	fne. gy. s.
1352	Aug. 9	56 03 00	154 25 00	55	55	41.6	66	gy. s. p. co.
1353	Aug. 9	56 09 00	154 15 00	55	53	41.9	75	bk. s.
1354	Aug. 9	56 18 00	154 10 00	54	53	43.1	54	gy. s. bk. sp.
1355	Aug. 9	56 28 00	154 05 00	53	50	48.2	28	gy. s.
1356	Aug. 9	56 27 00	153 55 00	53	52	48	23	brk. sh.
1357	Aug. 9	56 24 00	153 47 00	53	52	43.1	52	bn. s.
1358	Aug. 9	56 18 00	153 33 00	53	52	43.2	46	g.
1359	Aug. 9	56 15 00	153 25 00	54	53	41.4	52	gy. s. p.
1360	Aug. 9	56 12 00	153 18 00	54	53	41.5	88	fne. gy. s.
1361	Aug. 9	56 23 00	153 24 00	54	52	44.5	36	sh.
1362	Aug. 10	56 28 00	153 26 00	53	51	44.1	45	gy. s. sh.
1363	Aug. 10	56 34 00	153 29 00	52	51	41.1	73	bu. m.
1364	Aug. 10	56 35 00	153 19 00	54	53	42.1	53	gy. s. c.
1365	Aug. 10	56 36 00	153 10 00	54	51	42.6	58	bu. m.
1366	Aug. 10	56 37 00	153 00 00	53	51	42.1	49	bu. m.
1367	Aug. 10	56 39 00	152 50 00	53	51	42.1	44	rky.
1368	Aug. 10	56 40 00	152 40 00	53	51	42.6	51	gy. s.
1369	Aug. 10	56 41 00	152 30 00	53	51	42.1	49	rky.
1370	Aug. 10	56 42 00	152 21 00	54	52	43.3	37	s. p.
1371	Aug. 10	56 46 00	152 35 00	66	54	41.9	61	s. p.
1372	Aug. 10	56 51 00	152 50 00	66	54	44.7	37	gy. s. brk. sh.
1373	Aug. 10	56 58 00	153 10 00	57	55	47.3	18	brk. sh.
1374	Aug. 10	57 04 00	153 18 00	57	55	43.2	68	bk. m.
1375	Aug. 10	57 07 00	153 18 00	57	55	44.1	57	br. m.
1376	Aug. 12	56 55 00	153 19 00	54	53	43.8	71	fne. gy. s.
1377	Aug. 12	56 51 00	153 13 00	54	55	39.9	111	gn. m.
1378	Aug. 12	56 43 00	153 00 00	53	54	40.9	60	rky.
1379	Aug. 12	56 35 00	152 48 00	53	54	41.9	46	s. p.
1380	Aug. 12	56 28 00	152 36 00	52	53	42.6	38	p.
1381	Aug. 12	56 20 00	152 23 00	52	54	39.1	347	gn. m.
1382	Aug. 12	56 29 00	152 11 00	52	54	40.1	173	gy. s.
1383	Aug. 13	56 38 00	151 59 00	53	54	44.6	28	rky.
1384	Aug. 13	56 35 00	151 50 00	53	54	42.1	60	gy. s. r.
1385	Aug. 13	56 33 00	151 42 00	53	54	39.6	298	gy. s.
1386	Aug. 13	56 42 00	151 29 00	53	54	39.1	485	rky.
1387	Aug. 13	56 49 00	151 42 00	53	54	42.9	58	gy. s.
1388	Aug. 13	56 56 00	151 56 00	53	53	44.8	49	gy. s.
1389	Aug. 13	57 03 00	152 10 00	53	52	43.9	44	rky.
1390	Aug. 13	57 10 00	152 23 00	54	52	41.4	86	fne. gy. s.
1391	Aug. 13	57 12 00	152 27 00	55	53	44.4	53	fne. gy. s.
1392	Aug. 13	57 16 00	152 22 00	55	50	45.3	39	bn. s. g.
1393	Aug. 13	57 20 00	152 15 00	57	52	47.5	25	rky.
1394	Aug. 13	57 17 00	152 07 00	52	49	44.6	45	brk. sh.
1395	Aug. 13	57 11 00	151 52 00	52	49	45.1	43	gy. s. brk. sh.
1396	Aug. 13	57 05 00	151 37 00	52	53	45.1	46	co.
1397	Aug. 13	57 00 00	151 23 00	56	53	41.4	90	gy. s.
1398	Aug. 13	57 11 00	151 05 00	55	53	41.8	75	gy. s.
1399	Aug. 13	57 18 00	151 19 00	53	53	43.4	71	g.
1400	Aug. 13	57 24 00	151 33 00	52	50	45.5	39	rky.
1401	Aug. 13	57 30 00	151 46 00	52	50	44.9	57	rky.
1402	Aug. 13	57 35 00	151 52 00	52	50	42.9	81	rky.
1403	Aug. 21	57 43 00	152 14 00	60	54	46.5	69	bu. m.
1404	Aug. 21	57 42 00	152 09 00	60	54	------	17	rky.
1405	Aug. 21	57 46 00	152 01 00	57	53	48.5	28	sh.
1406	Aug. 21	57 49 00	151 53 00	57	53	44.6	56	gy. s. brk. sh.
1407	Aug. 21	57 52 00	151 47 00	56	55	45.1	47	gy. s.
1408	Aug. 21	57 49 00	151 39 00	56	55	47.3	30	g. sh.
1409	Aug. 21	57 46 00	151 32 00	62	55	48.8	33	g. sh.
1410	Aug. 21	57 43 00	151 25 00	56	52	48.1	35	crs. gy. s. brk. sh.
1411	Aug. 21	57 39 00	151 18 00	56	52	47.3	38	sh. co.
1412	Aug. 21	57 36 00	151 11 00	55	52	46	42	sh.
1413	Aug. 21	57 29 00	150 56 00	54	53	44.3	48	gy. s. sh.
1414	Aug. 21	57 23 00	150 41 00	55	55	42.7	57	gy. s.
1415	Aug. 22	57 19 00	150 35 00	55	56	41.6	72	gy. s. p.
1416	Aug. 22	57 26 00	150 06 00	56	57	39.6	200	gy. s. bk. sp.
1417	Aug. 22	57 32 00	150 18 00	56	56	42.6	59	gy. s. g.
1418	Aug. 22	57 39 00	150 33 00	54	52	45.1	51	s. brk. sh.
1419	Aug. 22	57 44 00	150 46 00	55	53	46.8	43	s brk. sh.
1420	Aug. 22	57 51 00	151 00 00	58	53	46.5	40	s. g.
1421	Aug. 22	57 57 00	151 08 00	55	54	46.5	36	brk. s. g.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off Alaska.						
	1888.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
1422	Aug. 22	58 03 00	151 26 00	55	54	44.1	78	fne. gy. s.
1423	Aug. 22	58 14 00	151 23 00	59	56	44.1	41	g.
1424	Aug. 22	58 20 00	151 11 00	59	53	43.6	60	gy. s. g.
1425	Aug. 22	58 12 00	151 01 00	63	53	44.1	56	gy. s. brk. sh.
1426	Aug. 22	57 58 00	150 32 00	59	56	41.3	102	gy. s.
1427	Aug. 22	57 52 00	150 16 00	56	55	41.1	114	gy. s. bk. sp.
1428	Aug. 22	57 47 00	150 00 00	54	55	41.3	113	gy. s. bk. sp.
1429	Aug. 23	57 41 00	149 44 00	55	56	41.1	140	gy. s. bk. sp.
1430	Aug. 23	57 47 00	149 31 00	55	56	41.6	119	gy. s. bk. sp.
1431	Aug. 23	57 53 00	149 19 00	55	56	41.1	166	gy. s. bk. sp.
1432	Aug. 28	57 59 00	149 33 00	54	56	41.5	112	gy. s.
1433	Aug. 23	58 05 00	149 48 00	59	55	41.3	128	gy. s.
1434	Aug. 23	58 11 00	150 03 00	63	56	44.1	69	gy. s. p.
1435	Aug. 23	58 17 00	150 17 00	64	56	49.1	37	brk. sh. g.
1436	Aug. 23	58 23 00	150 32 00	58	53	48.5	37	brk. sh.
1437	Aug. 23	58 29 00	150 48 00	58	54	44.1	50	s. p. brk. sh.
1438	Aug. 23	58 35 00	151 03 00	57	54	41.1	99	gy. s.
1439	Aug. 23	58 40 00	151 16 00	56	54	41.1	99	rky.
1440	Aug. 23	58 50 00	151 07 00	56	54	41.6	76	gy. s.
1441	Aug. 23	58 57 00	151 00 00	56	54	41.2	97	gy. m.
1442	Aug. 23	58 51 00	150 47 00	55	56	41.2	84	gy. s.
1443	Aug. 23	58 46 00	150 33 00	55	55	41.3	105	brk. sh. p.
1444	Aug. 23	58 40 00	150 17 00	55	54	41.1	69	gy. s. brk. sh.
1445	Aug. 23	58 33 00	150 03 00	55	54	41.1	67	gy. s. p.
1446	Aug. 23	58 27 00	149 47 00	55	54	40.9	84	bk. s.
1447	Aug. 24	58 21 00	149 33 00	56	56	41.3	90	gy. s.
1448	Aug. 24	58 14 00	149 17 00	56	56	41.2	85	gy. s.
1449	Aug. 24	58 08 00	149 04 60	56	56	41.7	77	gy s. p.
1450	Aug. 24	58 01 00	148 49 00	56	56	41.6	98	gy. s.
1451	Aug 24	57 54 00	148 34 00	57	56	38.1	507	bu. m.
1452	Aug. 24	58 00 00	148 20 00	60	59	37.6	594	bk. s. g.
1453	Aug. 24	58 10 00	148 20 00	62	59	37	761	bu. m.
1454	Aug. 24	58 24 00	148 46 00	60	59	41.7	71	gy. s.
1455	Aug. 24	58 31 00	148 57 00	58	57	41.8	66	gy. s. g. sh.
1456	Aug. 24	58 39 00	149 08 00	58	57	42.1	72	gy. s.
1457	Aug. 24	58 46 00	149 17 00	57	56	41.6	103	bu. m.
1458	Aug. 24	58 53 00	149 30 00	57	57	41.6	122	gy. m.
1459	Aug. 24	58 44 00	149 02 00	57	56	-------	118	gy. s.
1460	Aug. 24	58 37 00	148 45 00	57	56	41.8	99	gy. s.
1461	Aug. 24	58 30 00	148 29 00	57	57	41.5	106	g. s.
1462	Aug. 25	58 23 00	148 07 00	57	57	36	902	bu. m.
1463	Aug. 25	58 32 00	148 07 00	57	58	39.1	358	bu. m.
1464	Aug. 25	58 41 00	148 07 00	57	58	40.9	151	gy. s.
1465	Aug. 25	58 37 00	147 50 00	57	58	-------	301	s. g.
1466	Aug. 25	58 45 00	147 50 00	62	59	38	537	bu. m.
1467	Aug. 25	58 54 00	147 50 00	63	57	41.8	87	sh.
1468	Aug. 25	59 02 00	147 50 00	64	56	41.7	101	m. g.
1469	Aug. 25	59 05 00	147 33 00	62	56	39.2	308	s. r.
1470	Aug. 25	59 10 00	147 17 00	61	57	40.1	252	rky.
1471	Aug 25	39 15 00	147 00 00	59	53	41.1	109	bu. m.
1472	Aug. 25	59 20 00	146 42 00	57	53	42.6	92	bu. m.
1473	Aug. 25	59 21 00	146 26 00	59	53	44.8	45	rky.
1474	Aug. 25	59 24 00	146 19 00	58	53	51.8	11	rky.
1475	Aug 26	59 20 00	146 23 00	61	53	49.8	15	g. p.
1476	Aug. 26	59 12 00	146 20 00	58	53	-------	22	No specimen.
1477	Aug. 26	59 09 00	146 13 00	58	53	41.2	141	p.
1478	Aug. 26	59 03 00	145 56 00	61	57	37	620	bu. m.
1479	Aug. 26	58 51 00	145 25 00	59	58	35	2,425	m.
1480	Aug. 27	59 01 00	144 22 00	59	59	35	2,220	gy. oz.
1481	Aug. 27	59 08 00	143 30 00	60	59	35	2,138	gy. oz.
1482	Aug. 27	59 12 00	143 00 00	63	59	35.1	1,528	gy. oz.
1483	Aug. 27	59 00 00	142 37 00	65	60	35	1,764	gy. oz.
1484	Aug 27	58 54 00	142 33 00	64	60	35	1,745	br. and gy. oz.
1485	Aug. 27	58 56 00	142 18 00	62	60	35	1,675	br. and gy. oz.
1486	Aug. 27	58 58 00	141 59 00	60	59	35	1,500	gy. oz.
1487	Aug. 27	58 51 00	141 46 00	60	60	35.1	1,548	gy. oz.
1488	Aug. 28	58 17 00	140 35 00	60	60	35	1,815	gy. oz.
1489	Aug. 28	57 45 00	139 25 00	56	58	-------	1,778	br. and gy. oz.
1490	Aug. 29	56 35 00	137 55 00	57	57	-------	1,433	No specimen.
		Off British Columbia.						
1491	Aug. 30	54 02 00	134 34 00	57	57	35.3	1,571	br. and gy. oz.
1492	Aug. 30	52 32 00	133 05 00	67	60	35.1	1,601	gy. oz.
1493	Aug. 31	51 34 00	131 25 00	59	59	35.9	1,099	gn. m.
1494	Aug. 31	51 09 00	129 07 00	69	60	44.2	83	bn. m.
1495	Aug. 31	51 01 00	128 25 00	61	55	46.5	32	gy. s.
1496	Sept. 1	50 56 00	128 09 00	56	56	-------	22	No specimen.
1497	Sept. 1	50 55 00	128 04 30	56	56	-------	16	No specimen.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1888.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
1498	Sept. 19	48 20 00	124 58 00	54	52	44.2	82	rky.
1499	Sept. 19	48 18 00	125 05 30	54	52	44.2	106	bk. s.
1500	Sept. 19	48 16 00	125 12 30	57	52	43.7	108	r.
1501	Sept. 19	48 14 00	125 19 30	57	57	-------	55	yl. s.
1502	Sept. 19	48 12 00	125 26 30	57	57	45.7	70	bk. s.
1503	Sept. 19	48 10 00	125 33 30	59	60	45.2	86	bk. s.
1504	Sept. 19	48 08 00	125 40 30	59	61	44.8	105	bk. s.
1505	Sept. 19	48 06 00	125 47 30	59	61	38.2	586	gn. m.
1506	Sept. 19	48 04 00	125 54 30	59	59	38.6	505	gn. m.
1507	Sept. 19	48 03 00	126 01 30	60	59	38	692	gn. m.
1508	Sept. 19	48 01 00	126 09 00	62	60	37.2	768	br. m.
1509	Sept. 19	47 59 00	126 15 00	62	60	36.7	856	br. m.
1510	Sept. 19	47 57 00	126 22 30	62	60	36.7	816	br. m.
1511	Sept. 19	47 55 00	126 29 00	61	59	-------	1,239	br. m.
1512	Sept. 20	48 07 00	125 03 00	57	58	44.7	80	gn. m.
1513	Sept. 20	48 07 00	125 00 30	58	58	-------	178	fne. gy. s.
1514	Sept 20	48 05 00	125 08 00	58	58	44.7	77	gy. s. and p.
1515	Sept. 20	48 03 00	125 15 00	59	57	44.7	82	p.
1516	Sept. 20	48 01 00	125 22 00	59	59	42.7	218	bu. m. and g.
1517	Sept. 21	47 59 00	125 29 00	59	59	44.7	90	s. and g.
1518	Sept. 21	47 58 00	125 35 00	58	57	43.2	141	s. and g.
1519	Sept. 21	47 56 00	125 42 30	59	59	39.7	378	gn. m.
1520	Sept. 21	47 52 00	125 35 00	59	58	40.2	274	g.
1521	Sept. 21	47 49 00	125 28 00	58	58	39.7	462	yl. oz.
1522	Sept. 21	47 46 00	125 20 30	58	58	39.1	522	yl. oz.
1523	Sept. 21	47 47 00	125 14 00	60	58	40.1	378	yl. oz.
1524	Sept. 21	47 48 00	125 07 00	60	58	42.9	206	gy. oz.
1525	Sept. 21	47 49 00	124 59 00	60	58	45.1	67	No specimen.
1526	Sept. 21	47 51 00	124 52 00	63	58	46.5	52	gy. s and p.
1527	Sept. 21	47 48 00	124 43 00	61	58	48.1	30	gy. s.
1528	Sept. 21	47 43 00	124 41 00	61	59	48.1	33	fne. gy. s.
1529	Sept. 21	47 36 00	124 46 00	63	58	49.1	53	bk. s.
1530	Sept. 21	47 35 00	124 53 00	63	58	45.7	75	fne. gy. s.
1531	Sept. 21	47 33 00	125 01 00	63	58	44.9	111	fne. bk. s.
1532	Sept. 21	47 32 00	125 08 00	63	58	41.1	287	bu. m.
1533	Sept. 21	47 27 00	125 06 00	60	59	39.2	535	bu. m.
1534	Sept. 21	47 22 00	125 03 30	60	59	37.1	758	gy. oz.
1535	Sept. 21	47 17 00	125 01 30	59	59	38.3	578	gy. oz.
1536	Sept. 21	47 18 00	124 54 00	58	58	40.1	386	No specimen.
1537	Sept. 22	47 19 00	124 47 00	58	58	44.9	82	bu. m.
1538	Sept. 22	47 21 00	124 39 30	57	57	45.9	51	fne. bk. s.
1539	Sept. 22	47 22 00	124 32 00	57	57	46.9	28	g. and p.
1540	Sept. 22	47 17 09	124 30 00	57	57	47.6	28	gy. s.
1541	Sept. 22	47 12 00	124 28 00	57	57	46.9	28	p.
1542	Sept. 22	47 07 00	124 26 00	56	57	48.1	28	gy. s.
1543	Sept. 22	47 05 00	124 32 30	56	57	46.6	41	bk. s.
1544	Sept. 22	47 04 00	124 39 30	56	57	46	56	bk. s.
1545	Sept. 22	47 02 00	124 47 00	56	57	45.9	74	bk. s. p.
1546	Sept. 22	47 00 00	124 53 30	54	56	44.9	93	gn. m.
1547	Sept. 22	46 58 00	125 00 30	54	56	39.7	438	gn. m.
1548	Sept. 22	46 53 00	124 57 00	56	58	39.4	450	gn. m.
1549	Sept. 22	46 54 00	124 50 00	56	58	-------	91	No specimen.
1550	Sept. 22	46 56 00	124 43 00	57	59	-------	78	g. s.
1551	Sept. 22	46 51 00	124 41 00	57	59	46	76	g. m.
1552	Sept. 22	46 50 00	124 48 00	57	60	46	87	rky.
1553	Sept. 22	46 48 00	124 55 00	57	59	-------	250	rky.
1554	Sept. 22	46 43 00	124 52 00	58	60	44.9	181	rky.
1555	Sept. 22	46 45 00	124 44 00	58	60	46	80	gy. s.
1556	Sept. 22	46 47 00	124 37 00	60	60	46.1	64	rky.
1557	Sept. 22	46 49 00	124 30 00	60	59	47	42	rky.
1558	Sept. 22	46 51 00	124 22 30	60	59	48.1	33	gy. and bk. s.
1559	Sept. 22	46 54 00	124 15 00	60	59	57.8	18	gy. s.
1560	Sept. 22	46 54 00	124 22 30	57	59	48.3	35	fne. gy. s.
1561	Sept. 22	46 54 00	124 30 00	58	59	47	48	fne. gy. s.
1562	Sept. 22	46 51 00	124 35 00	57	59	46.4	58	fne. gy. s.
1563	Sept. 22	46 55 00	124 39 00	57	59	55.8	64	fne. gy. s.
1564	Sept. 22	46 52 00	124 45 00	57	53	46	78	fne. bk. s.
1565	Sept. 22	46 47 00	124 43 00	58	60	45.5	81	gy. s.
1566	Sept. 22	46 36 00	124 39 00	58	60	45	132	rky.
1567	Sept. 22	46 53 00	124 32 00	58	60	45.4	72	gy. m.
1568	Sept. 22	46 40 00	124 25 00	58	59	46	50	gy. s.
1569	Sept. 23	46 41 00	124 18 00	57	58	46.7	37	gy. s.
1570	Sept. 23	46 37 00	124 17 30	57	58	46.1	37	hrd. s.
1571	Sept. 23	46 35 00	124 24 30	58	58	-------	51	hrd. s.
1572	Sept. 23	46 33 00	124 31 00	58	58	45.1	82	hrd. s.
1573	Sept. 23	46 31 00	124 38 00	58	58	39.2	433	No specimen.
1574	Sept. 25	48 34 00	124 53 00	55	51	45.8	65	gn. m.
1575	Sept. 29	48 27 00	125 09 00	54	53	45.2	60	s. r.
1576	Oct. 10	48 16 00	123 40 00	52	49	45.2	101	s. g.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1888.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
1577	Oct. 11	46 34 00	124 12 30	60	57	52.9	20	gy. s.
1578	Oct. 11	46 33 00	124 19 00	61	58	47	38	fne. gy. s.
1579	Oct. 11	46 32 00	124 26 00	61	58	47	51	fne. gy. s.
1580	Oct. 11	46 31 00	124 33 00	61	58	45	153	gr. m.
1581	Oct. 11	46 30 00	124 39 30	61	58	39.6	432	br. oz.
1582	Oct. 11	46 28 00	124 33 00	61	58	44.8	98	fne. gy. s.
1583	Oct. 11	46 27 00	124 26 00	61	58	47	55	bk. s.
1584	Oct. 11	46 25 00	124 20 00	60	58	47.9	40	bu. m.
1585	Oct. 11	46 23 00	124 27 00	60	58	47	59	fne. br. s.
1586	Oct. 11	46 22 00	124 34 00	58	59	46.5	78	fne. gy. s.
1587	Oct. 11	46 21 00	124 41 00	58	59	42.5	260	bu. m.
1588	Oct. 13	46 03 00	124 22 00	57	57	45.1	73	fne. gy. s.
1589	Oct. 13	46 02 00	124 29 00	57	57	45.8	82	fne. gy. s.
1590	Oct. 13	46 00 00	124 36 00	58	56	46	96	br. s.
1591	Oct. 13	45 58 00	124 42 30	58	56	43.8	199	gy. oz.
1592	Oct. 13	46 03 00	124 45 00	60	61	44.2	174	gy. oz.
1593	Oct. 13	46 07 00	124 48 00	62	62	38.8	601	br. oz.
1594	Oct. 13	46 08 00	124 39 00	64	60	45.9	102	bk. s.
1595	Oct. 13	46 08 00	124 31 00	64	60	46.1	78	fne. gy. s.
1596	Oct. 13	46 17 00	124 21 30	62	60	46.6	81	bu. m.
1597	Oct. 13	46 16 00	124 28 30	58	57	43.1	231	bu. m.
1598	Oct. 13	46 15 00	124 36 00	57	57	39.8	421	br. oz.
1599	Oct. 13	46 14 00	124 42 30	57	56	39.6	475	gy. oz.
1600	Oct. 13	46 13 00	124 50 00	56	56	39.3	506	br. oz.
1601	Oct. 19	44 04 00	124 53 00	57	57	47.1	56	m.
1602	Oct. 19	44 02 00	124 55 00	57	57	47.6	51	crs. bk. s.
1603	Oct. 19	43 59 00	125 02 00	60	58	46.2	91	bk. s. g.
1604	Oct. 19	43 59 00	125 05 00	60	58	38.7	563	gy. m.
1605	Oct 19	43 54 00	125 05 00	60	59	40.3	355	bk. s.
1606	Oct. 19	43 50 00	125 01 30	60	59	42.1	299	gy. c.
	1889.							
1607	Jan. 5	34 00 00	120 30 00	64	59	46.3	226	gy. s.
1608	Jan. 8	34 25 30	120 20 30	------	------	------	21	gy. s. m. brk. sh.
1609	Jan. 15	32 36 30	117 20 30	57	59	53	97	yl. m.
1610	Jan. 15	32 36 00	117 26 00	57	59	43	324	yl. m.
1611	Jan. 15	32 35 30	117 32 00	56	59	38.7	660	br. oz.
1612	Jan. 15	32 34 30	117 43 30	56	59	44.5	266	rky.
1613	Jan. 15	32 33 30	117 55 00	55	58	46	211	rky.
1614	Jan. 15	32 32 00	118 07 00	57	58	37	1,047	gy. m.
1615	Jan. 16	32 31 00	118 18 30	55	59	37.8	770	fne. s. bk. sp.
1616	Jan. 16	32 30 00	118 30 30	55	59	37.5	615	fne. s. g.
1617	Jan. 16	32 29 00	118 42 00	55	59	------	324	r.
1618	Jan. 16	32 28 30	118 48 00	55	59	38.6	741	gn. oz.
1619	Jan. 16	32 28 00	118 53 30	55	59	43.2	692	gn. oz.
1620	Jan. 16	32 27 30	118 59 00	55	59	42.2	389	gy. s. brk. sh.
1621	Jan. 16	32 25 30	119 05 00	56	59	59.5	17	rky.
1622*a*	Jan. 16	32 25 15	119 04 30	56	59	------	6	rky.
1622	Jan. 16	32 20 00	119 04 30	56	59	43	337	s. g.
1623	Jan. 16	32 15 00	119 06 30	56	59	38	713	gy. m.
1624	Jan. 16	32 20 00	119 08 30	57	59	40.8	449	rky.
1625	Jan. 16	32 22 30	119 09 30	57	59	46.3	186	gy. s.
1626	Jan. 16	32 24 30	119 10 30	57	58	51.1	77	gy. s.
1627	Jan. 16	32 23 00	119 12 00	57	58	46.6	176	gy. s.
1628	Jan. 16	32 21 00	119 15 00	57	58	42.2	386	gy. s.
1629	Jan. 17	32 17 30	119 19 00	56	59	44.7	295	rky.
1630	Jan. 17	32 27 30	119 15 30	57	58	48.7	156	gy. s.
1631	Jan. 17	32 29 30	119 14 30	57	58	54.3	47	bk. s. g.
1632	Jan. 17	32 29 45	119 13 00	57	59	58.6	26	bk. s. g.
1633	Jan. 17	32 29 00	119 14 00	59	59	------	43	bk. s. g.
1634	Jan. 17	32 27 30	119 12 30	59	60	54.1	46	gy. s.
1635	Jan. 17	32 28 00	119 11 30	59	60	55.4	44	rky.
1636	Jan. 17	32 28 30	119 11 00	64	59	54.9	45	gy. s. bk. sp. c.
1637	Jan. 17	32 27 00	119 11 00	64	59	54.7	48	co. brk. sh.
1638	Jan. 17	32 26 45	119 09 30	64	59	55.3	47	bk. s. brk. sh.
1639	Jan. 17	32 26 30	119 08 30	64	60	59.4	30	gy. s. brk. sh.
1640	Jan. 17	32 26 30	119 07 30	60	59	------	11	rky.
1641	Jan. 17	32 28 00	119 05 30	60	59	54.5	51	r. gy. s. brk. sh.
1642	Jan. 17	32 30 00	119 06 15	57	58	49.1	113	gy. s. g.
1643	Jan. 17	32 32 00	119 07 00	57	58	46.9	174	r.
1644	Jan. 17	32 34 15	119 08 00	57	58	47.4	153	gy. s.
1645	Jan. 17	32 39 00	119 10 00	55	57	50.1	106	brk. sh. g.
1646	Jan. 17	32 45 00	119 11 30	55	57	53.4	59	gy. s.
1647	Jan. 17	32 47 45	119 12 30	56	58	55.4	243	gy. s.
1648	Jan. 17	32 53 00	119 12 30	56	58	40.3	495	br. m.
1649	Jan. 17	32 59 00	119 14 00	56	58	39.4	614	br. m.
1650	Jan. 18	33 05 00	119 15 00	56	58	39	892	m.
1651	Jan. 18	33 10 00	119 21 00	55	58	43.5	310	m.
1652	Jan. 18	33 12 00	119 23 00	55	58	54.1	47	fne. gy. s.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1889.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
1653	Jan. 18	33 11 00	119 19 15	59	59	40.8	464	br. s. g.
1654	Jan. 18	33 09 30	119 12 30	64	61	39	950	gn. oz.
1655	Jan. 18	33 06 30	118 58 30	67	61	39	924	m.
1656	Jan. 18	33 03 15	118 45 30	59	59	39.2	766	gy. s.
1657	Jan. 18	33 08 00	118 34 30	58	59	40.7	485	m.
1658	Jan. 18	33 08 30	118 22 30	57	59	40	560	m.
1659	Jan. 18	33 03 00	118 12 30	56	58	39.8	552	m.
1660	Jan. 19	32 57 00	118 02 30	56	58	40.7	426	gy. oz.
1661	Jan. 19	32 52 00	117 52 00	56	59	54.9	360	gy. oz.
1662	Jan. 19	32 46 00	117 41 30	55	59	41.4	428	gn. m.
1663	Jan. 23	32 46 30	118 00 30	58	59	41.6	395	r.
1664	Jan. 24	32 47 30	118 29 30	58	58	46.9	219	r.
1665	Jan. 24	32 47 00	118 37 00	59	59	39	657	gy. m.
1666	Jan. 24	32 46 15	118 44 00	59	59	39	613	r. crs. gy. s.
1667	Jan. 24	32 44 00	118 53 00	59	59	39	807	gn. m.
1668	Jan. 24	32 44 00	119 00 00	58	59	39.5	569	gn. m.
1669	Jan. 24	32 43 45	119 06 45	58	59	45.1	241	yl. s.
1670	Jan. 24	32 43 45	119 09 15	58	59	56.1	56	gy. s. brk. sh.
1671	Jan. 24	32 43 45	119 11 30	59	60	56.1	43	brk. sh. g.
1672	Jan. 24	32 43 45	119 14 00	59	60	55.3	46	r. sh.
1673	Jan. 24	32 43 45	119 16 30	59	60	-------	108	g. brk. sh.
1674	Jan. 24	32 45 45	119 15 15	59	60	52.8	83	yl. s. g.
1675	Jan. 24	32 45 45	119 12 30	59	60	52.8	71	gy. s. brk. sh.
1676	Jan. 24	32 46 00	119 10 00	64	61	52.8	173	gy. s.
1677	Jan. 24	32 46 00	119 07 30	64	61	-------	340	br. m.
1678	Jan. 24	32 42 30	119 05 15	66	61	54.9	53	gy. s.
1679	Jan. 24	32 42 45	119 07 15	66	61	56.9	28	r.
1680	Jan. 24	32 42 45	119 09 30	64	61	-------	48	r. brk. sh.
1681	Jan. 24	32 43 00	119 11 30	64	61	55	62	g. gy. s. brk sh.
1682	Jan. 24	32 43 00	119 14 00	64	61	55	229	r.
1683	Jan. 24	32 41 00	119 12 45	63	61	47.4	153	r.
1684	Jan. 24	32 41 00	119 10 45	63	61	47.4	118	gy. s.
1685	Jan. 24	32 41 15	119 08 45	63	61	47.4	52	s. brk. sh.
1686	Jan. 24	32 41 15	119 06 15	71	61	47.5	55	gy. s. brk. sh.
1687	Jan. 24	32 41 30	119 04 00	71	62	47.4	126	gy. s.
1688	Jan. 24	32 39 45	119 05 15	71	62	47.4	98	gy. s.
1689	Jan. 24	32 39 30	119 07 45	61	59	47.4	159	r.
1690	Jan. 24	32 39 15	119 10 00	61	59	47.3	110	gy. s.
1691	Jan. 24	32 39 00	119 12 15	61	59	47.2	125	gy. s.
1692	Jan. 24	32 36 30	119 12 15	58	59	49	107	gy. s. g.
1693	Jan. 24	32 34 15	119 12 00	58	59	50.5	88	gy. s. brk. sh.
1694	Jan. 24	32 32 00	119 12 00	58	59	53	62	gy. s.
1695	Jan. 24	32 30 15	119 13 30	58	59	-------	31	brk. sh.
1696	Jan. 24	32 29 45	119 11 30	58	59	53.1	47	brk. sh.
1697	Jan. 24	32 31 00	119 09 30	58	59	53.1	55	crs. wh. and bk. s. brk. sh.
1698	Jan. 24	32 32 15	119 07 45	58	59	53.6	63	crs. bk. s. brk. sh.
1699	Jan. 24	32 33 30	119 06 00	58	58	45.6	214	sh.
1700	Jan. 24	32 34 45	119 04 00	58	58	45.4	367	hrd. m.
1701	Jan. 24	32 32 30	119 03 15	59	58	41.8	406	gy. s. brk. sh.
1702	Jan. 24	32 30 30	119 02 30	59	58	41.6	286	gy. s.
1703	Jan. 24	32 28 30	119 01 45	59	58	41.8	141	gy. s.
1704	Jan. 24	32 26 30	119 01 15	59	58	-------	60	gy. s.
1705	Jan. 26	32 24 45	117 21 00	60	59	39.7	533	br m.
1706	Jan. 26	32 25 00	117 18 00	59	59	-------	51	hrd. m.
1707	Feb. 4	32 40 30	117 19 00	58	59	56	45	m.
1708	Feb. 4	32 55 30	117 34 00	60	61	40.8	441	gn. m.
1709	Feb. 4	33 00 00	117 37 30	61	61	40.5	454	gn m.
1710	Feb. 4	33 08 00	117 45 00	62	60	46.4	452	gy. m.
1711	Feb. 4	33 11 30	117 47 30	61	60	40.8	445	gy. m.
1712	Feb. 4	33 15 00	117 51 00	61	60	41	432	gn. m.
1713	Feb. 4	33 18 45	117 53 45	61	60	43.2	327	r. bk. s.
1714	Feb. 4	33 22 30	117 56 00	60	59	43.2	324	gn. m.
1715	Feb. 4	33 26 00	117 59 00	60	60	51	276	gn. m.
1716	Feb. 4	33 29 30	118 02 30	60	60	45	264	gn. m.
1717	Feb. 5	33 33 30	118 05 00	58	59	-------	161	gn. m.
1718	Feb. 5	33 38 30	118 06 00	58	59	59	21	hrd. m.
1719	Feb. 5	33 41 00	118 16 30	54	57	-------	18	fne gy. s.
1720	Feb. 5	33 40 00	118 16 00	54	57	-------	21	fne. gy. s.
1721	Feb. 5	33 39 00	118 15 00	54	57	57	26	fne. gy. s.
1722	Feb. 5	33 37 00	118 13 45	56	58	58	29	fne. gy. s.
1723	Feb. 5	33 36 15	118 13 00	56	58	58	29	fne. gy. s.
1724	Feb. 5	33 34 30	118 12 00	56	58	56	49	fne. gy. s.
1725	Feb. 5	33 32 45	118 10 45	56	58	49.5	115	fne. gy. s.
1726	Feb. 6	34 06 00	119 32 00	57	60	-------	124	gn. m.
1727	Feb. 6	34 05 00	119 31 30	57	58	-------	88	gn. m.
1728	Feb. 6	34 04 00	119 31 30	57	58	55.5	47	gy. s. bk. sp.
1729	Feb. 6	34 03 00	119 29 15	57	58	55	48	gy. s. bk. sp.
1730	Feb. 6	34 03 30	119 28 45	57	58	55.2	48	gy. s. kb. sp.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1889.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
1731	Feb. 6	34 03 45	119 28 15	57	58	56	50	gy. s. bk. sp. brk. sh.
1732	Feb. 6	34 04 00	119 28 00	57	58	54	62	fne. gy. s. g.
1733	Feb. 6	34 04 30	119 27 00	57	58	51.5	91	fne. gy. s.
1734	Feb. 6	34 03 30	119 27 00	57	58	55.8	49	gy. s.
1735	Feb. 6	34 02 30	119 27 45	57	58	56	48	gy. s. brk. sh.
1736	Feb. 6	34 01 45	119 28 00	57	58	55.5	42	wh. s. g. brk. sh.
1737	Feb. 8	33 44 30	119 59 00	58	57	-------	70	p.
1738	Feb. 8	33 48 00	120 10 30	57	59	44.4	261	r.
1739	Feb. 8	33 52 30	120 14 30	58	58	46.7	194	gy. s.
1740	Feb. 8	33 55 00	120 16 30	58	58	48.8	124	fne. gy. s. r.
1741	Feb. 8	34 00 00	120 20 00	58	58	56	30	fne. gy. s.
1742	Feb. 9	34 06 15	120 29 15	59	57	-------	44	r.
1743	Feb. 9	34 07 00	120 26 00	66	57	54.9	41	gy. s.
1744	Feb. 9	34 07 00	120 25 00	66	57	55	36	r.
1745	Feb. 9	34 07 00	120 23 45	66	57	53.9	42	g. brk. sh.
1746	Feb. 9	34 06 30	120 23 30	66	57	54.4	40	gy. s.
1747	Feb. 9	34 06 00	120 23 00	66	57	54.4	34	brk. sh. r.
1748	Feb. 11	34 23 15	119 40 30	62	59	-------	13	co. sponge.
1749	Feb. 11	34 22 45	119 40 00	62	59	-------	22	m.
1750	Feb. 11	34 23 15	119 39 45	62	60	-------	13½	r.
1751	Feb. 11	34 23 40	119 39 50	62	60	-------	13	m.
1752	Feb. 11	34 21 10	119 38 40	62	60	59	26	m.
1753	Feb. 11	34 21 00	119 37 45	66	61	59	26	gy. s. r.
1754	Feb. 11	34 18 45	119 42 00	63	60	53.5	68	gn. m.
1755	Feb. 11	34 20 30	119 44 45	63	60	54.8	50	gn. m. r.
1756	Feb. 12	33 59 45	119 21 30	70	60	-------	52	gy. s.
1757	Feb. 12	34 00 00	119 21 30	70	60	-------	36	co. s. brk. sh.
1758	Feb. 12	33 42 45	119 24 30	67	61	40.5	825	gn. m.
1759	Feb. 12	33 37 30	119 25 00	64	61	40	917	gn. m.
1760	Feb. 12	33 30 30	119 25 30	64	61	39.8	899	gn. m.
1761	Feb. 12	33 24 00	119 26 30	62	60	41	416	bk. s.
1762	Feb. 12	33 19 30	119 27 00	62	60	57	40	brk. sh.
1763	Feb. 13	33 17 30	119 24 30	61	58	55.5	42	g. brk. sh. r.
1764	Feb. 13	33 17 45	119 28 30	61	58	-------	32	gy. s.
1765	Feb. 13	33 14 15	119 23 30	60	58	-------	21	g.
1766	Feb. 13	33 14 00	119 24 00	60	57	-------	22½	no specimen.
1767	Feb. 13	33 16 15	119 20 00	60	57	51.4	71	co.
1768	Feb. 13	33 20 00	119 14 30	62	58	39.5	644	gy. s.
1769	Feb. 14	33 28 15	118 58 00	55	56	46	185	fne. bk. and wh. s.
1770	Feb. 14	33 27 30	118 51 00	55	56	39.4	718	gn. m.
1771	Feb. 14	33 26 15	118 43 15	56	57	40	551	gn. m.
1772	Feb. 26	32 22 30	117 18 00	61	60	52.8	76	gy. s. g.
1763	Feb. 26	32 17 30	117 19 30	61	60	38	735	gn. m.
1774	Feb. 26	32 05 45	117 23 15	63	59	37.8	773	gy. m.
		Off west coast of Mexico.						
1775	Feb. 26	31 50 00	117 27 30	61	59	37.5	801	gy. oz.
1776	Feb. 26	31 29 30	117 33 00	60	59	37.5	803	gy. oz.
1777	Feb. 27	31 03 30	117 40 15	60	60	37.5	856	gy. m.
1778	Feb. 27	30 21 00	117 51 30	61	60	35.3	1,512	choc. oz.
1779	Feb. 27	29 56 30	117 58 00	60	60	35	1,776	br. m.
1780	Feb. 27	29 38 00	118 06 15	62	62	35.2	1,857	br. m.
1781	Feb. 27	29 14 30	118 17 00	64	62	35.4	1,424	gy. m. s.
1782	Feb. 27	29 08 30	118 13 30	63	61	35.5	1,447	gy. s.
1783	Feb. 28	28 56 15	118 18 00	61	61	-------	29	gy. s. brk. sh.
1784	Feb. 28	28 57 00	118 16 00	61	61	59	42	g. sh.
1785	Feb. 28	28 57 30	118 17 00	61	61	-------	19½	gy. s.
1786	Feb. 28	28 48 00	118 17 00	61	61	36	1,121	gy. m. s.
1787	Feb. 28	28 31 00	118 05 00	61	61	35	1,737	gy. m.
1788	Mar. 1	27 46 30	117 36 00	60	62	-------	2,135	
1789	Mar. 1	26 58 00	117 04 00	65	63	34.8	2,065	br. oz.
1790	Mar. 1	26 12 00	116 37 00	75	65	34.9	2,124	br. oz.
1791	Mar. 2	25 29 00	116 09 00	65	64	35	2,165	br. m.
1792	Mar. 2	25 15 00	116 00 00	64	64	34.9	2,131	br. oz.
1793	Mar. 2	25 05 00	115 56 00	66	64	35.4	1,343	br. m. s.
1794	Mar. 2	24 53 05	115 51 45	64	65	64.4	55	g. coralline.
1795	Mar. 2	24 54 00	115 43 00	64	65	40.5	493	r. bk. s.
1796	Mar. 2	24 51 00	115 43 00	65	65	35.4	1,312	br. m. s.
1797	Mar. 2	24 35 00	115 41 00	67	66	34.9	2,131	no specimen.
1798	Mar. 2	23 46 00	115 34 00	66	65	35	2,119	br. m.
1799	Mar. 3	22 57 00	115 25 00	67	66	34.9	2,167	br. oz.
1800	Mar. 3	22 07 30	115 13 00	67	68	35	2,280	br. m.
1801	Mar. 3	21 17 30	115 04 00	72	71	35	1,845	br. m.
1802	Mar. 3	20 26 00	114 58 00	68	69	35	2,072	br. oz.
1803	Mar. 4	19 35 00	114 52 00	67	69	34.9	2,032	br. m.
1804	Mar. 4	18 44 00	114 45 00	70	70	35	1,925	fne. bk. s.
1805	Mar. 4	18 33 30	114 44 00	72	71	35	1,732	gy. s. g.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of Mexico.						
	1889.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
1806	Mar. 4	18 25 30	114 41 00	71	71	46.4	281	bk. s.
1807	Mar. 6	18 23 00	114 36 00	71	70	39.8	651	bk. and co. s. glob.
1808	Mar. 6	18 23 00	114 18 15	71	74	35.3	1,987	br. m.
1809	Mar. 7	18 23 30	113 48 00	70	72	35.1	2,008	br. m.
1810	Mar. 7	18 24 30	113 15 00	69	72	36.7	2,012	br. m.
1811	Mar. 7	18 25 00	112 44 00	71	73	35.3	1,951	br. m.
1812	Mar. 7	18 28 30	112 12 00	75	74	35.4	1,854	br. m.
1813	Mar. 7	18 32 00	111 41 00	70	72	-------	1,829	br. m.
1814	Mar. 7	18 35 00	111 21 00	70	71	35.3	1,786	br. m.
1815	Mar. 7	18 38 00	111 11 00	70	70	35.3	1,823	r.
1816	Mar. 7	18 39 00	111 07 00	69	70	35.5	1,619	rky.
1817	Mar. 8	18 39 45	111 02 00	70	70	36.2	1,161	rky.
1818	Mar. 8	18 40 45	110 58 30	70	70	39.4	651	rky.
1819	Mar. 10	18 53 00	110 51 00	70	70	35.8	1,264	br. m. bk. s.
1820	Mar. 10	19 03 00	110 50 30	71	70	35.6	1,635	br. m.
1821	Mar. 10	19 12 00	110 50 00	71	72	37.5	910	br. m.
1822	Mar. 10	19 15 30	110 49 15	71	73	50.3	210	rky.
1823	Mar. 10	19 21 30	110 47 00	73	73	44	375	bk. s.
1824	Mar. 10	19 26 15	110 45 30	72	73	39.2	665	r.
1825	Mar. 10	19 40 15	110 41 15	72	73	35.5	1,807	br. m.
1826	Mar. 10	20 09 00	110 32 30	70	70	35.5	1,643	br. m.
1827	Mar. 11	20 55 15	110 18 30	69	70	35.5	1,761	dk. br. m.
1828	Mar. 11	21 41 00	110 04 30	72	74	35.4	1,694	gn. m.
1829	Mar. 11	22 25 30	109 42 15	69	71	35.5	1,711	gn. m.
1830	Mar. 20	27 37 15	111 09 00	70	66	39.8	601	gn. m.
1831	Mar. 24	28 44 15	112 32 15	64	61	64.2	89	s. brk. sh.
1832	Mar. 27	31 23 00	114 25 00	66	65	65	10	m. s.
1833	Mar. 27	31 13 30	114 27 15	66	63.9	63.9	18	m.
		Off west coast of United States.						
1834	June 7	46 45 30	124 36 00	56	56	45.7	55	fne. gy. s.
1835	June 7	46 44 45	124 32 45	56	56	45.1	58	rky.
1836	June 8	44 04 00	124 53 30	54	52	48.6	48	bu. m.
1837	June 8	43 54 30	124 47 30	59	57	43.9	95	m.
1838	June 8	43 57 30	124 49 00	59	57	47.3	61	m. and g.
1839	June 8	44 59 30	124 50 30	57	56	52.1	43	m. and g.
1840	June 8	44 09 30	124 51 30	57	56	43.6	95	fne. bk. s.
1841	June 8	44 11 15	124 48 15	57	56	-------	68	g.
1842	June 8	44 16 00	124 42 00	56	56	45.9	70	g.
1843	June 8	44 19 00	124 40 00	57	55	46.4	61	g.
1844	June 8	44 22 15	124 38 00	57	55	-------	60	m. and g.
1845	June 8	44 25 30	124 36 00	57	55	47.2	73	fne. gy. s.
1846	June 9	44 28 30	124 34 00	57	55	45.6	78	fne. bk. s.
1847	June 9	44 31 15	124 31 45	56	56	45.1	75	gl.
1848	June 9	44 34 30	124 29 15	56	56	45.8	60	rky.
1849	June 9	44 37 30	124 27 00	57	57	46.6	59	fne. p. and bk. s.
1850	June 9	44 40 15	124 25 00	57	57	46.6	57	fne. bk. s.
1851	June 9	44 43 30	124 22 30	56	57	46.6	65	fne. gy. s.
1852	June 9	44 41 00	124 16 15	56	57	46.1	45	fne. gy. s. bk. sp.
1853	June 9	44 39 00	124 11 00	55	57	46.1	34	fne. gy. s.
1854	June 13	45 55 30	124 01 15	56	54	48.6	25	fne. gy. s.
1855	June 14	48 29 00	124 55 15	56	54	46.6	45	rky. and g.
1856	June 14	48 29 30	124 56 30	56	54	47.1	31	g. and brk. sh.
1857	June 29	47 23 00	125 44 00	57	54	36.7	860	gn. m.
1858	Aug. 28	45 52 00	124 10 30	60	59	45.6	53	fne. gy. s.
1859	Aug. 29	45 51 30	124 17 00	60	58	45.6	73	fne. gy. s. bk. sp.
1860	Aug. 29	45 50 45	124 23 30	60	58	45.8	83	fne. gy. s. m.
1861	Aug. 29	45 50 15	124 29 30	59	58	45.3	87	fne. gy. s. m.
1862	Aug. 29	45 49 45	124 36 00	59	58	45.1	81	c.
1863	Aug. 29	45 49 15	124 43 00	59	59	44.6	120	fne. gy. s.
1864	Aug. 29	45 39 00	124 40 00	59	59	43.5	186	m.
1865	Aug. 29	45 38 30	124 32 30	60	59	45	123	m.
1866	Aug. 29	45 38 30	124 25 00	60	59	45.3	91	m.
1867	Aug. 29	45 38 00	124 17 30	60	60	45.2	81	m. and fne. gy. s.
1868	Aug. 29	45 38 00	124 10 00	61	60	45.7	58	fne. gy. s.
1869	Aug. 29	45 37 30	124 04 00	61	60	47.4	42	fne. gy. s. and sh.
1870	Aug. 29	45 33 30	124 03 30	61	60	47.2	45	fne. gy. s.
1871	Aug. 29	45 29 00	124 04 00	60	60	46.7	48	fne. gy. s.
1872	Aug. 29	45 28 30	124 10 45	61	62	45.6	73	fne. gy. s.
1873	Aug. 29	45 28 30	124 17 30	62	62	45.3	94	gn. m.
1874	Aug. 29	45 28 30	124 25 00	62	61	45.1	120	gy. s. bk. sp.
1875	Aug. 29	45 28 30	124 32 00	62	61	42.4	259	gn. m.
1876	Aug. 29	45 23 45	124 32 00	63	62	42.8	216	gn. m.
1877	Aug. 29	45 18 30	124 32 15	64	66	42.6	238	yl. m.
1878	Aug. 29	45 18 00	124 25 15	64	66	42.8	217	m.
1879	Aug. 29	45 17 30	124 17 30	67	66	44.4	130	m.
1880	Aug. 29	45 17 30	124 12 00	68	64	45.6	88	gn. m.
1881	Aug. 29	45 17 30	124 05 00	68	64	46.1	52	fne. gy. s.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1889.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
1882	Aug. 29	45 12 30	124 05 45	63	61	45.9	49	fne. gy. s.
1883	Aug. 29	45 07 30	124 06 00	62	61	46.8	48	fne. gy. s.
1884	Aug. 29	45 07 00	124 13 00	62	61	45.6	85	gy. s. bk. sp.
1885	Aug. 29	45 06 45	124 19 45	62	60	44.8	119	gn. m.
1886	Aug. 29	45 06 30	124 27 15	62	60	43.4	190	gn. m.
1887	Aug. 29	45 06 15	124 34 30	62	60	43.4	191	gn. m.
1888	Aug. 30	45 01 00	124 35 00	62	62	42.6	245	m.
1889	Aug. 30	44 55 00	124 36 00	62	62	43.5	203	m.
1890	Aug. 30	44 54 30	124 29 15	62	62	45.4	100	m.
1891	Aug. 30	44 54 00	124 22 30	62	61	-------	79	m.
1892	Aug. 30	44 53 30	124 15 30	62	61	45.7	63	m. and s.
1893	Aug. 30	44 53 00	124 09 00	62	61	47.7	35	fne. gy. s.
1894	Aug. 30	44 47 30	124 08 15	62	61	48	33	fne. gy. s.
1895	Aug. 30	44 43 15	124 09 00	62	61	47.9	33	fne. gy. s.
1896	Aug. 30	44 43 00	124 16 30	60	61	47.7	46	fne. gy. s.
1897	Aug. 30	44 43 00	124 23 45	60	60	45.8	64	fne. gy. s.
1898	Aug. 30	44 43 00	124 30 30	60	60	45.5	87	fne. gy. s.
1899	Aug. 30	44 43 00	124 43 00	60	60	44.2	156	fne. gy. s. bk. sp.
1900	Aug. 30	44 43 00	124 46 00	61	61	41.7	217	yl. m.
1901	Aug. 30	44 38 00	124 46 30	62	61	44.7	139	bk. s.
1902	Aug. 30	44 38 00	124 54 00	62	61	40.9	311	gn. m.
1903	Aug. 30	44 33 00	124 54 30	61	61	40.9	340	fne. bk. s.
1904	Aug. 30	44 33 30	124 48 00	61	61	44.5	185	gn. m.
1905	Aug. 30	44 33 45	123 41 30	60	61	44.8	123	m.
1906	Aug. 30	44 34 00	124 35 15	57	59	45.1	94	m.
1907	Aug. 30	44 34 15	124 28 30	56	59	46.1	60	fne. bk. s.
1908	Aug. 30	44 34 15	124 23 30	56	59	-------	60	crs. s. brk. sh.
1909	Aug. 30	44 34 30	124 17 00	56	59	46.7	43	fne. gy. s.
1910	Aug. 30	44 30 30	124 10 00	56	56	48.5	28	fne. gy. s.
1911	Aug. 30	44 30 00	124 11 00	56	56	47.5	28	fne. gy. s. bk. sp.
1912	Aug. 30	44 25 30	124 12 30	57	56	46.7	28	fne. gy. s.
1913	Aug. 30	44 26 00	124 19 30	56	56	45.8	43	fne. gy. s.
1914	Aug. 30	44 26 30	124 26 15	56	56	44.8	42	rky.
1915	Aug. 30	44 27 00	124 34 00	56	56	45.2	56	crs. bk. s.
1916	Aug. 30	44 27 30	124 41 00	55	58	45.1	79	fne. gy. s.
1917	Aug. 31	44 28 00	124 48 00	55	58	43.1	167	g.
1918	Aug. 31	44 28 30	124 54 45	56	57	41.3	265	m.
1919	Aug. 31	44 23 15	124 54 45	56	57	40.9	293	m.
1920	Aug. 31	44 18 00	124 54 45	56	58	41.3	282	m.
1921	Aug. 31	44 18 00	124 47 30	59	58	45.7	84	bk. s.
1922	Aug. 31	44 18 00	124 41 00	56	57	46.4	51	c.
1923	Aug. 31	44 18 15	124 34 00	56	57	46.2	56	bk. s. and g.
1924	Aug. 31	44 18 15	124 28 00	56	56	45.7	54	gy. s. bk. sp.
1925	Aug. 31	44 18 30	124 21 00	56	56	46.5	45	gy. s. bk. sp.
1926	Aug. 31	44 18 30	124 15 00	57	56	47.2	35	gy. s. bk. sp.
1927	Aug. 31	44 18 30	124 12 30	57	56	47.7	31	yl. s. bk. sp.
1928	Aug. 31	44 13 30	124 12 30	57	56	48.9	31	fne. gy. s.
1929	Aug. 31	44 07 30	124 11 00	58	57	47.7	29	fne. gy. s.
1930	Aug. 31	44 07 00	124 18 00	57	57	46.9	45	fne. gy. s.
1931	Aug. 31	44 06 30	124 25 00	57	57	46.2	60	m.
1932	Aug. 31	44 06 00	124 31 30	57	57	45.9	69	gn. m.
1933	Aug. 31	44 06 00	124 37 30	59	59	45.7	70	gn. m.
1934	Aug. 31	44 05 30	124 44 15	59	59	46.1	63	gn. m.
1935	Aug. 31	44 05 30	124 51 30	59	59	47.1	51	br. c. and p.
1936	Aug. 31	44 05 00	124 56 00	59	59	40.9	346	m.
1937	Aug. 31	43 59 30	124 59 00	59	59	41.8	326	fne. gy. s. bk. sp.
1938	Aug. 31	43 53 00	124 59 00	59	59	40.2	602	gn. m.
1939	Aug. 31	43 53 00	124 56 00	68	63	40.4	365	gn. m.
1940	Aug. 31	43 52 45	124 53 00	68	63	41.4	284	gn. m.
1941	Aug. 31	43 52 30	124 50 00	68	63	42.8	175	fne. bk. s.
1942	Aug. 31	43 52 15	124 47 00	61	61	43.7	159	m. and bk. s.
1943	Aug. 31	43 52 00	124 44 00	61	61	43.7	159	m.
1944	Aug. 31	43 52 00	124 40 30	60	60	43.7	159	m.
1945	Aug. 31	43 47 45	124 37 00	60	60	43.7	185	gn. m.
1946	Aug. 31	43 43 30	124 34 30	60	60	45.1	127	gn. m.
1947	Aug. 31	43 39 15	124 30 30	60	60	45.7	97	gn. m.
1948	Aug. 31	43 35 30	124 26 30	59	59	45.7	80	gn. m.
1949	Aug. 31	43 31 00	124 24 15	59	59	45.8	66	fne. gy. s.
1950	Sept. 1	43 36 00	124 22 30	59	59	45.2	65	gn. m.
1951	Sept. 1	43 40 15	124 21 00	56	56	45.7	62	gn. m.
1952	Sept. 1	43 45 30	124 19 00	55	55	46.4	57	gn. m.
1953	Sept. 1	43 38 00	124 24 15	56	55	46.2	62	bk. s. and m.
1954	Sept. 1	43 50 30	124 29 00	56	55	46.1	72	m.
1955	Sept. 1	43 53 00	124 34 00	56	55	45.7	92	gn. m.
1956	Sept. 1	43 55 30	124 38 30	59	59	45.1	120	gn. m.
1957	Sept. 1	43 58 00	124 44 00	59	59	45.5	87	bk. s. and m.
1958	Sept. 1	44 01 00	124 49 15	61	59	-------	58	r.
1959	Sept. 1	44 02 00	124 50 15	61	59	46.2	58	r.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1889.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
1960	Sept. 1	43 59 30	124 49 30	60	59	45.7	77	c.
1961	Sept. 1	43 59 30	124 47 00	60	59	45.8	74	c.
1962	Sept. 1	44 00 15	124 49 30	60	59	45.7	75	c.
1963	Sept. 1	44 01 00	124 52 00	59	59	45.7	61	r.
1964	Sept. 1	44 01 30	124 54 30	59	59	45.8	74	p.
1965	Sept. 1	43 59 15	124 54 30	60	60	45.6	79	rky.
1966	Sept. 1	43 58 00	124 54 15	60	60	43.6	174	gn. m. fne. gy. s.
1967	Sept. 1	43 57 45	124 52 30	60	60	45.5	88	rky.
1968	Sept. 1	43 57 30	124 50 30	60	60	45.2	92	No bottom specimen.
1969	Sept. 1	43 58 30	124 50 00	62	59	45.7	79	gn. m. and s.
1970	Sept. 1	43 54 20	124 49 15	62	60	43.7	155	bk. s.
1971	Sept. 1	43 54 10	124 47 30	62	62	43.9	139	bk. s. and m.
1972	Sept. 1	43 54 00	124 46 00	62	62	44.7	124	bk. s. and m.
1973	Sept. 1	43 54 45	124 46 40	62	62	45.5	90	gn. m. and g.
1974	Sept. 1	43 55 30	124 45 20	62	62	45.7	78	bk. s. and g.
1975	Sept. 1	43 56 15	124 45 00	60	59	45.7	70	c. and g.
1976	Sept. 1	43 57 00	124 44 30	60	59	45.7	70	c.
1977	Sept. 1	43 57 45	124 44 00	60	59	45.7	67	gn. m. and g.
1978	Sept. 1	43 58 30	124 44 20	60	59	45.7	61	rky. brk. sh.
1979	Sept. 1	44 00 00	124 45 00	60	59	47.2	52	co.
1980	Sept. 2	44 00 00	124 11 30	56	56	.....	18	fne. gy. s.
1981	Sept. 2	44 01 30	124 11 30	58	59	48.8	24	yl. s.
1982	Sept. 2	44 16 00	124 12 00	60	59	47.7	31	fne. gy. s.
1983	Sept. 2	44 16 30	124 09 00	62	57	.....	19	fne. gy. s.
1984	Sept. 2	44 18 00	124 08 30	62	56	.....	12	fne. gy. s.
1985	Sept. 2	44 20 00	124 13 00	57	54	47.8	31	wh. s. bk. sp. sh.
1986	Sept. 3	44 37 00	124 15 00	56	54	47.5	44	gy. s.
1987	Sept. 3	44 35 00	124 13 00	55	55	46.2	43	fne. gy. s. and gn. m.
1988	Sept. 3	44 33 00	124 11 00	56	55	46.7	32	bk. s.
1989	Sept. 3	44 28 30	124 23 00	56	56	46.5	45	c. and p.
1990	Sept. 3	44 27 00	124 24 30	56	56	46.5	44	c.
1991	Sept. 3	44 26 30	124 26 00	56	56	46.3	48	c.
1992	Sept. 3	44 28 00	124 24 20	59	56	47.2	43	rky.
1993	Sept. 3	44 39 00	124 08 30	57	56	48.2	29	fne. gy. s. bk. sp.
1994	Sept. 3	44 41 00	124 09 00	55	52	46.9	28	fne. gy. s. bk. sp.
1995	Sept. 7	45 46 15	124 04 45	63	60	45.1	46	fne. gy. s. and g.
1996	Sept. 7	45 45 30	124 02 30	60	56	45.3	40	fne. gy. s.
1997	Sept. 7	45 44 30	123 59 30	60	56	.....	22	fne. gy. s.
1998	Sept. 7	45 43 00	123 58 15	62	56	.....	15	fne. gy. s.
1999	Sept. 8	45 31 15	124 00 45	57	52	47.2	25	fne. gy. s.
2000	Sept. 8	45 35 00	123 58 15	57	52	48.4	18	gy. s. rd. sp.
2001	Sept. 8	45 30 00	123 59 45	57	51	48.5	18	fne. gy. s.
2002	Sept. 8	45 28 30	124 00 00	57	53	48.2	16	fne. gy. s.
2003	Sept. 8	45 26 30	124 00 15	57	56	48	21	rky.
2004	Sept. 8	45 23 00	124 00 30	54	50	.....	18	fne. gy. s.
2005	Sept. 8	45 19 00	124 02 30	54	50	46.7	39	fne. gy. s.
2006	Sept. 8	45 19 00	124 00 30	57	51	47.2	23	fne. bk. s.
2007	Sept. 9	45 17 30	124 00 30	51	48	47.7	19	fne. gy. s. bk. sp.
2008	Sept. 9	45 13 00	124 00 30	51	48	47.7	27	fne. gy. s.
2009	Sept. 9	45 11 30	124 00 00	51	49	.....	19	fne. gy. s. yl. m.
2010	Sept. 9	45 10 30	123 59 45	52	48	.....	15	fne. bk. s.
2011	Sept. 9	45 11 00	124 03 30	52	48	45.8	34	fne. gy. s. bk. sp.
2012	Sept. 9	45 12 00	124 07 00	52	48	45.9	52	fne. gy. s. bk. sp.
2013	Sept. 9	45 13 00	124 10 30	52	48	45.6	69	fne. gy. s.
2014	Sept. 9	45 09 30	124 10 45	55	50	45.4	69	fne. gy. s.
2015	Sept. 9	45 07 30	124 06 00	55	50	45.9	49	crs. s.
2016	Sept. 9	45 07 15	124 03 00	55	50	46.2	33	fne. gy. s.
2017	Sept. 9	45 07 00	124 00 30	55	50	.....	15	fne. gy. s.
2018	Sept. 9	45 04 00	124 02 30	55	50	.....	23	fne. gy. s.
2019	Sept. 9	45 04 00	124 06 15	52	48	46	51	fne. gy. s.
2020	Sept. 9	45 04 00	124 11 00	52	48	45.5	68	fne. gy. s.
2021	Sept. 9	45 02 00	124 13 00	54	57	45.2	71	fne. gy. s. bk. sp.
2022	Sept. 9	45 01 15	124 07 00	55	50	46.2	52	bk. s.
2023	Sept. 9	45 00 45	124 03 45	55	50	.....	27	fne. gy. s.
2024	Sept. 9	45 00 30	124 02 15	55	51	.....	16	fne. gy. s. bk. sp. brk. sh.
2025	Sept. 9	44 58 30	124 04 00	55	49	47.7	19	r. and sh.
2026	Sept. 10	44 03 45	124 12 00	49	51	.....	30	fne. gy. s.
2027	Sept. 10	44 03 15	124 16 30	49	51	46	42	fne. gy. s. and sh.
2028	Sept. 10	43 54 00	124 11 00	49	51	47.1	13	fne. gy. s.
2029	Sept. 10	43 49 00	124 14 00	50	49	46.7	36	fne. gy. s.
2030	Sept. 10	43 47 00	124 12 00	52	49	.....	13	fne. gy. s.
2031	Sept. 10	43 42 30	124 14 30	52	49	.....	28	fne. gy. s.
2032	Sept. 10	43 40 30	124 15 00	57	50	.....	28	fne. gy. s.
2033	Sept. 10	43 37 00	124 16 00	52	51	45.9	53	fne. gy. s.
2034	Sept. 10	43 34 00	124 16 30	53	49	46.7	40	fne. gy. s.
2035	Sept. 10	43 31 00	124 16 00	53	49	.....	11	fne. gy. s.
2036	Sept. 10	43 27 30	124 18 00	52	50	48.2	23	fne. gy. s.
2037	Sept. 10	43 23 30	124 21 30	54	52	.....	17	fne. gy. s.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1889.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2038	Sept. 10	43 19 00	124 25 30	54	52	48.7	28	fne. gy. s.
2039	Sept. 10	43 13 00	124 26 00	55	52	47.7	27	fne. gy. s.
2040	Sept. 10	43 08 30	124 28 00	55	52	46.1	25	rky. co.
2041	Sept. 10	43 09 00	124 35 00	57	50	45.8	64	p.
2042	Sept. 10	43 09 30	124 42 00	55	51	44.7	134	fne. gy. s.
2043	Sept. 10	43 10 00	124 49 00	54	52	44.7	165	bk. s.
2044	Sept. 10	43 14 15	124 52 00	54	54	42.2	234	bk. s.
2045	Sept. 11	43 17 30	124 55 30	56	57	40.1	384	gn. m.
2046	Sept. 11	43 17 00	124 42 00	59	59	44.9	116	gn. m.
2047	Sept. 11	43 17 00	124 34 30	55	59	46	64	c.
2048	Sept. 11	43 21 00	124 27 00	51	51	45.8	46	fne. gy. s.
2049	Sept. 11	43 23 00	124 35 00	51	51	45.7	68	c.
2050	Sept. 11	43 24 00	124 42 00	51	51	45.3	119	gn. m.
2051	Sept. 11	43 25 30	124 48 30	53	54	41.1	326	gn. m.
2052	Sept. 11	43 20 30	124 49 00	53	54	41.7	306	bk. s. and m.
2053	Sept. 11	43 16 00	124 48 00	55	54	42.7	233	gn. m.
2054	Sept. 11	43 12 00	124 47 30	56	54	44.2	188	gn. m.
2055	Sept. 11	43 06 30	124 47 00	56	54	45.2	141	fne. bk. s.
2056	Sept. 11	43 06 30	124 40 00	56	53	45.7	91	gn. m.
2057	Sept. 11	43 06 30	124 32 00	56	53	45.9	58	gn. m.
2058	Sept. 11	42 59 00	124 36 00	56	53	45.9	49	fne. gy. s.
2059	Sept. 11	42 58 30	124 44 00	55	49	45.9	76	gn. m.
2060	Sept. 11	42 58 00	124 52 30	53	51	45.5	120	gn. m.
2061	Sept. 11	42 58 00	124 00 00	53	51	40.9	407	gn. m.
2062	Sept. 11	42 49 30	124 00 00	53	51	39.9	382	gn. m. and p.
2063	Sept. 11	42 48 30	124 53 00	53	51	44.8	140	rky.
2064	Sept. 11	42 49 00	124 46 00	54	50	45.7	114	fne. gy. s.
2065	Sept. 11	42 59 30	124 40 30	53	49	46.7	47	fne. gy. s. bk. sp.
2066	Sept. 12	43 03 30	124 33 30	50	48	45.8	44	g.
2067	Sept. 12	43 04 30	124 26 30	50	47	46.2	21	fne. gy. s.
2068	Sept. 12	43 08 00	124 27 30	50	48	-------	25	rky.
2069	Sept. 12	43 00 00	124 27 30	50	48	47.2	17	fne. gy. s.
2070	Sept. 12	42 55 00	124 32 30	50	48	46.1	28	fne. gy. s.
2071	Sept. 12	42 53 00	124 34 00	52	47	-------	17	fne. gy. s.
2072	Sept. 12	42 51 15	124 37 00	52	47	47.7	34	fne. gy. s.
2073	Sept. 12	42 48 15	124 37 45	51	47	-------	29	fne. gy. s.
2074	Sept. 12	42 46 45	124 38 00	53	48	-------	44	r. and brk. sh.
2075	Sept. 12	42 45 30	124 38 15	53	48	46.8	34	st. and brk. sh.
2076	Sept. 12	42 44 15	124 33 00	54	48	47.5	23	fne. gy. s.
2077	Sept. 13	42 42 30	124 30 30	56	48	47.7	26	bk. s.
2078	Sept. 13	42 43 00	124 37 00	56	48	45.7	62	fne. gy. s.
2079	Sept. 13	42 43 00	124 42 00	50	48	44.7	161	fne. gy. s.
2080	Sept. 13	42 42 00	124 50 00	50	48	40.8	329	gn. m.
2081	Sept. 13	42 35 30	124 50 00	53	49	39.3	492	gn. m.
2082	Sept. 13	42 35 30	124 42 30	53	49	45.7	151	gn. m.
2083	Sept. 13	42 35 00	124 35 30	53	49	46.7	61	br. m.
2084	Sept. 13	42 34 30	124 29 00	52	49	46.5	34	fne. gy. s.
2085	Sept. 13	42 28 30	124 33 00	51	49	46.8	35	fne. gy. s.
2086	Sept. 13	42 29 00	124 40 00	51	49	46.9	63	fne. gy. s.
2087	Sept. 13	42 29 00	124 46 30	51	48	43.8	206	c.
2088	Sept. 13	42 22 00	124 51 00	52	48	39.2	505	bk. s. g.
2089	Sept. 13	42 21 00	124 44 00	52	48	42.7	236	bk. s.
2090	Sept. 13	42 21 00	124 36 00	52	48	45.4	79	gn. m.
2091	Sept. 13	42 21 00	124 33 00	52	48	45.5	62	gn. m.
2092	Sept. 14	43 23 30	124 24 00	53	51	46.8	40	fne. gy. s.
2093	Sept. 14	43 25 00	124 27 00	53	51	46.2	59	fne. gy. s.
2094	Sept. 14	43 28 30	124 32 30	54	52	45.7	79	fne. gy. s.
2095	Sept. 14	43 32 00	124 37 30	55	53	44.2	157	gn. m.
2096	Sept. 14	43 35 30	124 42 30	56	56	41.2	277	gn. m.
2097	Oct. 12	42 25 00	124 32 30	58	57	51.8	39	fne. gy. s.
2098	Oct. 12	42 22 30	124 32 30	58	57	51.8	44	fne. gy. s.
2099	Oct. 12	42 13 30	124 27 30	61	59	52	51	bk. s.
2100	Oct. 12	42 14 00	124 34 00	61	59	47.7	94	fne. gy. s.
2101	Oct. 12	42 14 00	124 41 00	58	59	42	273	m.
2102	Oct. 12	42 05 30	124 37 30	60	59	-------	244	No bottom obtained.
2103	Oct. 12	42 04 30	124 31 00	60	59	49.5	65	bk. s. and m.
2104	Oct. 12	42 03 30	124 23 00	61	60	51.8	46	fne. gy. s. and m.
2105	Oct. 12	42 00 30	124 20 00	66	62	54.2	21	fne. dk. gy. s.
2106	Oct. 12	41 58 30	124 17 00	67	61	53.8	18	fne. dk. gy. s.
2107	Oct. 12	41 58 00	124 22 30	64	60	51.8	43	gn. m.
2108	Oct. 12	41 58 00	124 29 00	58	59	48.9	68	gn. m.
2109	Oct. 12	41 58 00	124 36 00	58	59	42.2	261	gn. m.
2110	Oct. 12	41 52 00	124 36 00	58	59	40.9	336	gn. m.
2111	Oct. 12	41 50 30	124 30 00	59	59	46.7	120	gn. m.
2112	Oct. 12	41 50 00	124 26 00	59	59	50.7	59	bk. s.
2113	Oct. 12	41 44 30	124 26 00	58	57	47.7	80	gn. m.
2114	Oct. 12	41 45 00	124 32 00	58	57	42.2	256	gn. m.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1889.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2115	Oct. 12	41 38 30	124 31 30	58	57	42.7	277	gn. m.
2116	Oct. 13	41 38 00	124 25 00	58	57	49.3	70	gn. m.
2117	Oct. 13	41 38 00	124 17 30	57	56	52.3	38	m.
2118	Oct. 13	41 38 00	124 12 30	57	56	54	25	m.
2119	Oct. 13	41 32 00	124 13 30	57	55	53.8	27	dk. gy. s.
2120	Oct. 13	41 32 00	124 19 00	57	55	51.9	42	m.
2121	Oct. 13	41 32 00	124 24 00	57	55	49.3	58	m.
2122	Oct. 13	41 52 00	124 30 00	56	55	47.9	94	m.
2123	Oct. 13	41 32 00	124 35 00	56	55	39.6	412	c.
2124	Oct. 13	41 26 15	124 33 30	56	55	39.1	488	gn. m.
2125	Oct. 13	41 26 15	124 27 00	56	56	48.7	80	gn. m.
2126	Oct. 13	41 26 15	124 20 00	56	56	50.7	49	gn. m.
2127	Oct. 13	41 26 15	124 13 30	56	56	51.8	38	gn. m.
2128	Oct. 13	41 26 30	124 07 00	56	56	54.3	18	fne. gy. s.
2129	Oct. 13	41 20 00	124 11 00	56	56	51.2	36	brk. sh. and p.
2130	Oct. 13	41 20 00	124 17 30	56	56	49.9	52	gn. m.
2131	Oct. 13	41 20 00	124 24 30	56	56	48.7	86	gn. m.
2132	Oct. 13	41 20 00	124 31 30	58	58	39.8	373	gn. m.
2133	Oct. 13	41 13 00	124 31 00	58	58	39.4	465	gn. m.
2134	Oct. 13	41 12 30	124 23 30	58	58	45.3	167	gn. m.
2135	Oct. 13	41 12 00	124 17 00	58	58	49.7	58	gn. m.
2136	Oct. 13	41 12 30	124 11 00	57	56	54.6	29	fne. gy. s. and p.
2137	Oct. 13	41 05 30	124 13 00	57	56	52.4	26	fne. dk. gy. s.
2138	Oct. 13	41 04 30	124 19 00	57	56	53.8	75	gn. m.
2139	Oct. 13	41 03 30	124 26 00	57	56	42.7	268	gn. m.
2140	Oct. 13	40 57 15	124 25 30	57	56	44.1	182	gn. m.
2141	Oct. 13	40 57 00	124 20 00	57	56	49	65	gn. m.
2142	Oct. 13	40 56 00	124 14 00	57	56	53.8	30	fne. gy. s.
2143	Oct. 13	40 50 15	124 15 00	57	52	50.2	36	gn. m.
2144	Oct. 13	40 50 00	124 22 00	56	52	48.2	70	gn. m.
2145	Oct. 13	40 50 00	124 28 00	55	52	42.1	254	m.
2146	Oct. 13	40 44 30	124 33 30	56	56	41.7	294	m.
2147	Oct. 13	40 43 00	124 27 00	56	56	49.2	50	m.
2148	Oct. 13	40 43 00	124 22 00	56	56	53.3	27	m.
2149	Oct. 13	40 37 30	124 25 00	56	55	-------	23	fne. dk. gy. s.
2150	Oct. 14	40 39 00	124 31 00	56	55	41.7	355	m.
2151	Oct. 14	40 32 00	124 34 00	56	55	48.9	65	bk. s. and m.
2152	Oct. 14	40 29 00	124 40 00	56	55	38.7	627	gn. m.
	1890.							
2153	Mar. 11	37 18 50	122 28 30	55	53	52.8	21	fne. bk. s.
2154	Mar. 11	37 16 00	122 25 50	60	53	-------	10	brk. sh. r.
2155	Mar. 12	37 05 00	122 19 00	55	54	-------	17	rky. sh.
2156	Mar. 12	36 55 00	122 17 00	56	55	47.8	122	bk. s. m.
2157	Mar. 15	36 58 00	122 21 00	57	55	47.6	97	crs. bk. s. m
2158	Mar. 22	37 47 55	123 10 00	53	53	52	17	sh.
2159	Mar. 22	37 47 50	123 10 50	53	53	51.3	19	rky.
2160	Mar. 22	37 47 45	123 11 10	53	53	50.8	45	sh. and rky.
2161	Mar. 22	37 47 35	123 11 00	53	53	51.4	29	rky.
2162	Mar. 22	37 47 30	123 19 00	52	53	42	324	r. and c.
2163	Mar. 22	37 48 30	123 30 20	52	53	36.8	900	gn. m.
2164	Mar. 24	38 00 00	123 22 20	51	51	49.7	60	s. sh.
2165	Mar. 24	38 01 00	123 24 18	51	51	51.2	39	r.
2166	Mar. 24	38 01 05	123 24 55	51	51	-------	35	rky.
2167	Mar. 24	38 01 10	123 25 40	52	52	51.3	37	rky.
2168	Mar. 24	38 01 15	123 26 15	52	52	51.3	30	rky. co.
2169	Mar. 24	38 01 35	123 26 50	52	52	-------	40	rky.
2170	Mar. 24	38 01 45	123 28 00	52	52	-------	55	crs. bk. s. brk. sh.
2171	Mar. 24	38 00 45	123 28 30	52	52	-------	65	gy. s. g. brk. sh.
2172	Mar. 24	37 59 40	123 28 55	52	52	-------	139	g. brk. sh.
2173	Mar. 24	37 59 20	123 27 45	55	55	-------	73	r.
2174	Mar. 24	37 58 55	123 26 35	55	55	-------	56	brk. sh.
2175	Mar. 24	37 58 50	123 26 10	55	55	-------	34	r. co.
2176	Mar. 24	38 00 40	123 25 55	54	55	-------	33	rky.
2177	Mar. 24	38 02 45	123 27 35	54	55	-------	44	r. co.
2178	Mar. 24	38 02 25	123 26 20	54	55	-------	42	r. co.
2179	Mar. 24	38 02 00	123 25 05	54	55	-------	47	rky.
2180	Mar. 24	38 01 40	123 23 50	54	55	-------	57	yl. s.
2181	Mar. 24	37 59 45	123 24 25	54	55	-------	41	yl. s.
2182	Mar. 24	37 58 45	123 25 00	57	55	-------	39	r. co. and s
2183	Mar. 24	37 57 45	123 25 15	57	55	-------	45	yl. s.
2184	Mar. 24	37 58 00	123 26 35	57	55	-------	67	r. yl. s.
2185	Mar. 24	37 58 20	123 27 45	57	55	-------	231	m.
2186	Mar. 24	38 00 10	123 27 00	54	55	-------	36	r. co.
2187	Mar. 24	38 02 15	123 27 30	52	55	-------	47	rky.
2188	Mar. 24	38 04 25	123 28 00	52	52	-------	84	g.
2189	Mar. 24	38 06 15	123 29 00	52	52	-------	180	fne. gy. s bk. sp.
2190	Mar. 24	38 17 00	123 30 00	51	52	42.5	269	gn. m.
2191	Mar. 24	38 15 40	123 31 30	51	52	42.9	246	gn. m.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1890.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
2192	Mar. 24	38 20 30	123 32 50	51	52	44.9	186	m.
2193	Mar. 24	38 25 10	123 34 25	50	52	47.9	134	m.
2194	Mar. 24	38 30 00	123 35 40	50	52	47.1	121	m.
2195	Mar. 24	38 34 50	123 37 00	50	52	46.7	88	m.
2196	Mar. 24	38 39 10	123 38 30	50	52	-------	78	m.
2197	Mar. 24	38 44 00	123 40 00	50	52	47.4	66	m.
2198	Mar. 25	38 48 30	123 42 00	50	52	47.9	58	gn. m.
2199	Mar. 25	38 52 50	123 46 00	49	52	47.9	51	rky.
2200	Mar. 25	38 57 10	123 48 30	49	52	48.9	55	bk. s.
2201	Mar. 25	38 55 50	123 52 00	49	51	47.9	67	bk. s.
2202	Mar. 25	38 53 30	123 57 35	49	51	44.9	189	br. m.
2203	Mar. 25	38 48 00	123 55 50	49	50	39.5	486	m.
2204	Mar. 25	38 49 30	123 52 20	49	51	47.3	91	bk. s.
2205	Mar. 25	38 51 00	123 49 00	49	51	49.4	69	m.
2206	Mar. 25	38 52 25	123 45 30	49	50	-------	49	hrd. m.
2207	Mar. 25	38 47 15	123 40 30	50	51	48.3	55	r. gn. m.
2208	Mar. 25	38 46 00	123 44 00	50	51	47.1	69	gn. m. sh.
2209	Mar. 25	38 44 30	123 47 10	50	51	46.7	90	bk. s.
2210	Mar. 25	38 44 00	123 49 00	50	51	45.4	143	m.
2211	Mar. 25	38 43 20	123 51 00	50	51	42.9	249	m.
2212	Mar. 25	38 38 40	123 46 30	51	51	-------	314	bk. s.
2213	Mar. 25	38 39 30	123 44 00	50	51	46.6	103	bk. s.
2214	Mar. 28	38 37 45	123 30 00	48	51	-------	58	gn. m.
2215	Mar. 28	38 35 45	123 34 15	48	50	-------	82	gn. m.
2216	Mar. 28	38 32 45	123 39 30	49	50	46	128	bk. s.
2217	Mar. 28	38 31 30	123 42 00	49	50	41.6	314	gn. m.
2218	Mar. 28	38 26 00	123 37 00	51	51	43	273	gn. m.
2219	Mar. 28	38 27 00	123 35 00	51	51	46.2	113	bk. s.
2220	Mar. 28	38 29 40	123 29 45	51	51	48.4	82	gy. s.
2221	Mar. 28	38 32 00	123 25 30	51	51	47.5	67	br. m.
2222	Mar. 28	38 32 50	123 24 30	51	51	48	60	br. m. r.
2223	Mar. 28	38 28 30	123 19 00	52	52	48.5	54	br. m.
2224	Mar. 28	38 25 40	123 24 00	52	52	48.5	74	bk. s.
2225	Mar. 28	38 23 00	123 29 00	52	52	47.5	107	m.
2226	Mar. 28	38 20 00	123 34 00	51	52	42.8	242	m.
2227	Mar. 28	38 14 00	123 36 00	52	52	39.3	518	gn. m.
2228	Mar. 28	38 18 15	123 25 50	52	52	45.6	124	gn. m.
2229	Apr. 2	36 56 30	122 24 40	51	52	43.6	208	gn. m.
2230	Apr. 3	36 51 40	122 24 00	51	52	36.9	921	br. m.
2231	Apr. 3	36 47 30	122 20 10	51	52	37	860	br. m.
2232	Apr. 3	36 43 20	122 16 25	51	52	38.1	620	br. m.
2233	Apr. 3	36 39 20	122 12 50	51	52	37.9	739	m.
2234	Apr. 3	36 34 00	122 07 30	51	52	37.4	958	gn. m.
2235	Apr. 3	36 33 30	122 04 00	51	52	39	575	gn. m.
2236	Apr. 3	36 32 35	122 02 00	51	52	39.9	450	m.
2237	Apr. 3	36 32 30	122 00 00	51	52	42.9	246	gn. m.
2238	Apr. 3	36 27 20	121 58 00	52	51	46.9	59	fne. gy. s.
2239	Apr. 3	36 19 00	122 00 00	53	52	46.5	62	crs. s.
2240	Apr. 3	36 19 20	122 05 00	53	52	47.2	99	g.
2241	Apr. 3	36 04 00	121 45 20	53	53	40.1	426	br. m.
2242	Apr. 3	35 59 00	121 40 20	52	53	40.1	426	br. m.
2243	Apr. 3	35 55 15	121 37 20	52	53	41.7	342	br. m.
2244	Apr. 3	35 50 50	121 33 00	52	54	43.5	240	br. m.
2245	Apr. 4	35 39 30	121 28 00	53	54	42.5	271	gn. m.
2246	Apr. 4	35 36 05	121 22 00	54	53	46.2	144	gy. s.
2247	Apr. 4	35 32 15	121 16 00	55	52	44.2	198	gn. m.
2248	Apr. 5	35 30 50	121 11 00	51	51	-------	113	m.
2249	Apr. 5	35 29 20	121 13 20	50	51	43.9	191	gn. m.
2250	Apr. 5	35 18 50	121 05 00	53	52	44.9	146	gn. m.
2251	Apr. 5	35 08 40	121 02 00	56	54	43	224	gn. m.
2252	Apr. 5	35 09 50	120 58 00	56	54	45	119	gn. m. rky.
2253	Apr. 5	35 04 00	120 57 30	55	54	45	143	gn. m.
2254	Apr. 5	34 58 30	120 58 00	54	53	44.7	182	gn. m.
2255	Apr. 5	34 51 40	120 54 30	54	53	45.9	142	gn. m.
2256	Apr. 5	34 45 30	120 55 00	54	54	46	133	gn. m.
2257	Apr. 5	34 46 00	120 49 50	54	54	47.9	62	r. m.
2258	Apr. 5	34 46 15	120 45 35	54	54	48.9	47	gn. m. r.
2259	Apr. 5	34 37 30	120 45 00	54	54	49	44	r. and m.
2260	Apr. 6	34 36 00	120 50 40	54	54	45.6	158	
2261	Apr. 6	34 34 50	120 50 05	54	54	42.3	274	m. and s.
2262	Apr. 6	34 29 25	120 50 00	54	54	41.9	312	gn. m.
2263	Apr. 6	34 30 00	120 47 25	54	54	42.2	242	gn. m.
2264	Apr. 6	34 30 40	120 44 55	54	54	46.4	139	m.
2265	Apr. 6	34 31 10	120 43 20	53	52	48	67	bk. s. m.
2266	Apr. 6	34 31 50	120 42 00	52	53	48.7	53	bk. s. m.
2267	Apr. 6	34 26 55	120 40 20	53	52	46	174	gn. m.
2268	Apr. 6	36 00 09	121 38 10	67	61	41.8	299	gn. m. r.
2269	Apr. 6	36 02 30	121 41 00	67	61	43.8	346	m.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1890.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2270	Apr. 6	36 07 10	121 43 00	63	56	42.9	228	m. and g.
2271	Apr. 6	36 09 40	121 45 30	61	54	41.1	356	m.
2272	Apr. 6	36 11 00	121 47 00	61	54	44.7	183	s. m.
2273	Apr. 6	36 13 05	121 52 15	61	55	46.7	101	fne. gy. s.
2274	Apr. 6	36 15 00	121 57 50	60	54	49 3	36	rky.
2275	Apr. 11	36 42 50	122 04 10	55	53	38.1	881	rky.
2276	Apr. 11	36 45 45	122 04 40	54	52	39.3	519	gn. m.
2277	Apr. 11	36 45 40	121 53 05	54	53	47.7	66	bk. s. r.
		Bering Sea.						
2278	May 21	54 02 25	162 50 30	44	44	39	271	m. s. p.
2279	May 22	54 15 00	164 53 00	41	42	38.5	42	r. brk. sh.
2280	May 22	54 34 00	165 37 00	39	43	38.5	178	bk. s.
2281	May 22	54 55 40	166 06 00	38	42	38.2	80	yl. m.
2282	May 23	54 58 30	166 24 30	39	43	.....	81	
2283	May 23	55 00 50	166 41 30	38	41	.....	80	m.
2284	May 23	55 00 00	166 59 00	36	41	.....	88	sh.
2285	May 23	54 59 00	167 17 00	36	41	38	117	s. sh.
2286	May 23	54 49 20	167 10 00	38	43	38.6	186	gn. m.
2287	May 23	54 23 45	166 38 30	38	43	38.2	320	gn. m.
2288	May 23	54 09 20	166 28 00	38	42	37	593	gn. m.
2289	May 28	54 27 00	165 18 00	42	44	.....	99	bk. s.
2290	May 28	54 29 30	165 10 00	42	43	38	47	bk. s.
2291	May 28	54 28 20	165 08 00	42	45	39	45	gy. s.
2292	May 28	54 31 40	165 09 00	42	43	.....	32	bk. s. brk. sh.
2293	May 28	54 34 30	164 55 45	41	42	.....	24	bk. s.
2294	May 28	54 39 00	164 51 00	41	42	.....	30	bk. s.
2295	May 28	54 41 15	164 48 30	41	42	.....	28	crs. s. g.
2296	May 28	54 47 30	164 46 00	41	42	40	34	g.
2297	May 28	54 57 40	164 36 50	41	42	41	31	bk. p.
2298	May 28	54 57 30	164 31 20	40	44	41.5	18	fne. bk. s.
2299	May 29	54 54 45	164 19 30	45	44	.....	16	bk. s.
2300	May 29	54 59 00	164 05 35	44	44	39.3	12	rky.
2301	May 29	55 03 10	163 49 30	44	44	41	15	fne. g.
2302	May 29	55 03 50	163 37 30	44	44	41	16	fne. bk. s.
2303	May 29	55 04 15	163 30 45	44	44	41	11	fne. bk. s.
2304	May 29	55 10 00	163 13 45	42	44	.....	15	s.
2305	May 29	55 16 10	163 01 30	44	46	.....	14	fne. gy. s.
2306	May 29	55 22 00	162 53 30	44	46	.....	13	bk. g.
2307	May 29	55 27 40	162 44 15	44	45	.....	16	fne. gy. s. bk. sp.
2308	May 29	55 32 30	162 38 00	44	45	.....	22	fne. gy. s.
2309	May 29	55 36 40	162 30 20	44	47	.....	23	rky. brk. sh.
2310	May 29	55 39 45	162 24 00	44	45	.....	22	g. brk. sh.
2311	May 29	55 42 45	162 18 00	44	45	.....	20	fne. bk. s.
2312	May 29	55 46 15	162 12 00	45	45	41	16	rky. sh.
2313	May 29	55 48 15	162 07 15	44	45	.....	17	p. bk. s.
2314	May 29	55 51 00	162 01 00	45	45	.....	15½	g.
2315	May 29	55 52 00	161 58 00	45	45	.....	13	r.
2316	May 30	55 54 40	161 51 40	41	42	.....	16	bk. s. brk. sh.
2317	May 30	55 57 00	161 45 00	42	43	.....	16	g. brk. sh.
2318	May 30	55 59 40	161 35 45	41	42	.....	22	bk. s.
2319	May 30	56 01 00	161 26 00	41	42	.....	16	bk. s.
2320	May 30	56 01 30	161 16 45	43	43	.....	14	bk. s.
2321	May 30	56 01 40	161 12 30	43	43	.....	12	bk. s.
2322	May 30	56 02 45	161 03 30	43	43	.....	12	crs. bk. s.
2323	May 30	56 04 15	160 55 20	43	44	.....	13	fne. br. s.
2324	May 30	56 04 15	160 46 00	43	44	.....	11	crs. s. and g.
2325	May 30	56 04 00	160 43 45	44	43	.....	12	fne. g.
2326	May 30	56 09 15	160 30 30	44	45	.....	14	fne. gy. s.
2327	May 30	56 12 00	160 23 15	44	45	.....	13	fne. bk. s.
2328	May 30	56 14 15	160 21 15	48	46	.....	13	crs. bk. s.
2329	May 30	56 18 00	160 18 00	46	48	.....	11	bk. s. g.
2330	May 30	56 25 40	160 06 20	46	46	39	13	g.
2331	May 30	56 33 20	159 49 30	47	42	.....	16	bk. g.
2332	May 30	56 42 20	159 25 20	45	41	.....	18	bk. g.
2333	May 30	56 46 30	159 08 30	45	44	.....	14	bk. g.
2334	May 30	56 48 30	158 58 30	45	44	.....	12	gy. s.
2335	May 30	56 52 00	158 51 00	44	43	.....	9	fne. gy. s.
2336	May 30	56 54 00	158 48 30	44	43	.....	11	fne. bk. s.
2337	May 30	57 02 45	158 40 30	44	42	.....	10	fne. gy. s. bk. sp.
2338	May 30	57 05 00	158 39 00	44	42	.....	12	fne. gy s. bk. sp.
2339	May 31	57 08 30	158 36 15	44	43	.....	13	fne. bk. s.
2340	May 31	57 13 30	158 32 00	44	43	.....	19	bk. s. g.
2341	May 31	57 19 00	158 25 30	44	43	.....	19	bk. s. g.
2342	May 31	57 24 30	158 19 30	43	43	.....	16	bk. s. g.
2343	May 31	57 29 30	158 13 30	42	43	.....	15	fne. gy. s. g.
2344	May 31	57 32 00	158 09 30	43	43	.....	14½	fne. gy. s. g.
2345	May 31	57 34 50	158 06 00	42	43	.....	13	fne. gy. s. g.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Bering Sea.						
	1890.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2346	May 31	57 38 00	157 57 00	43	42	.....	10	gy. s.
2347	May 31	57 40 00	157 53 00	43	43	.....	7.5	gy. s.
2348	May 31	57 44 00	157 52 30	44	44	.....	10	gy. s.
2349	May 31	57 48 40	147 49 00	44	44	.....	8	crs. bk. s.
2350	May 31	57 52 40	157 46 30	44	44	.....	10	gy. s.
2351	May 31	57 57 00	157 43 00	46	45	.....	7	gy. s.
2352	May 31	58 00 40	157 41 00	45	44	.....	7	gy. s.
2353	May 31	58 03 40	157 40 00	46	45	.....	5.25	gy. s.
2354	May 31	58 07 00	157 41 30	46	45	.....	7	gy. s.
2355	May 31	58 08 40	157 42 00	45	44	.....	5	fne. gy. s.
2356	May 31	58 14 00	157 44 00	45	44	.....	4.5	g.
2357	May 31	58 22 20	157 42 00	45	44	.....	4.5	p.
2358	May 31	58 27 10	157 39 00	46	45	.....	5	p.
2359	May 31	58 32 00	157 33 00	46	45	.....	5.5	g.
2360	May 31	58 34 00	157 31 00	45	44	.....	6.25	bk. s.
2361	May 31	58 35 00	157 28 30	48	49	.....	4	s.
2362	May 31	58 39 00	157 19 30	48	49	.....	7.5	p.
2363	June 2	58 40 45	157 16 20	43	45	.....	4.25	bk. s.
2364	June 2	58 40 30	157 21 30	44	45	.....	4.5	fne. gy. s.
2365	June 2	58 40 30	157 22 30	44	45	.....	5 feet	fne. gy. s.
2366	June 2	58 39 00	157 24 00	45	45	.....	5.5	fne. gy. s. bk. sp.
2367	June 2	58 37 45	157 26 30	45	45	.....	12	fne. gy. s. bk. sp.
2368	June 7	58 07 00	158 54 00	35	40	.....	22.25	fne. gy. s.
2369	June 8	58 12 00	159 06 15	38	41	.....	21.5	fne. gy. s. and r.
2370	June 8	58 18 40	159 17 30	40	41	.....	10.5	fne gy. s.
2371	June 8	58 40 00	160 00 00	46	48	.....	8	
2372	June 8	58 42 15	160 04 00	43	45	.....	8.5	
2373	June 8	58 44 15	160 07 30	45	46	.....	11.5	
2374	June 9	58 28 30	161 53 00	39	38	35	12.5	g.
2375	June 9	58 35 30	162 11 00	39	38	37	25	g.
2376	June 13	58 18 30	162 50 00	38	39	35.5	16.5	fne. gy. s.
2377	June 14	58 00 00	163 24 30	38	39	.....	23	fne. gy. s.
2378	June 14	57 49 50	163 44 00	38	39	37	24	fne. gy. s.
2379	June 14	56 05 00	164 38 00	43	44	36	51	gn. m.
2380	June 15	55 52 30	164 47 00	42	43	35	46	bk. s. and m.
2381	June 15	55 37 30	164 51 00	42	43	39	58	bk. s. and m.
2382	June 24	54 40 30	165 41 00	43	44	38.5	148	m. and fne. s.
2383	June 24	54 37 40	164 58 00	42	44	40.8	30	bk. g.
2384	June 24	54 46 00	164 55 30	45	45	40.2	37	crs. s. g. and p.
2385	June 24	54 56 30	165 15 30	43	45	40	62	bk. m.
2386	June 24	54 54 00	164 36 00	43	45	41.3	40	bk. g.
2387	June 24	54 53 15	164 33 00	42	44	41.4	24	bk. g.
2388	June 24	54 59 00	164 13 00	43	44	41.2	25	crs. s. g.
2389	June 25	55 08 45	164 18 00	42	44	40	46	bk. g.
2390	June 25	55 18 30	184 23 15	42	44	39	56	bk. m. and g.
2391	June 25	55 25 00	164 05 20	42	45	38.8	53	bk. s. and g.
2392	June 25	55 14 00	163 21 30	44	46	42.6	26	bk. s.
2393	June 25	55 34 30	163 37 00	45	46	40	44	gy. s.
2394	June 25	55 38 00	163 20 45	49	48	39.5	42	gy. s.
2395	June 25	55 33 30	163 16 15	45	47	40	36	bk. s.
2396	June 25	55 23 40	163 07 30	42	45	42.6	20	bk. g.
2397	June 26	55 21 30	162 56 00	43	47	43.8	16	crs. bk. s. sh.
2398	June 27	55 36 15	163 09 00	43	45	39	35	fne. gy. s.
2399	June 27	55 37 45	162 40 30	42	46	41	26	fne. gy. s.
2400	June 27	55 51 10	162 30 30	42	44	.....	34	fne. gy. s.
2401	June 28	55 57 45	162 43 00	42	44	.....	46	fne. gy. s.
2402	June 28	56 05 15	162 31 00	42	45	37	41	fne. gy. s.
2403	June 28	55 58 30	162 18 00	42	45	37	40	fne. gy. s. bk. sp.
2404	June 28	56 06 15	161 58 00	42	44	40.6	34	bk. s.
2405	June 28	56 19 00	162 26 00	43	45	38	40	fne. gy. s. and g.
2406	June 28	56 33 45	162 26 00	44	45	39	41	fne. gy. s.
2407	June 28	56 20 30	161 54 45	42	45	38.2	48	fne. gy. s. bk. sp
2408	June 28	56 06 30	161 25 30	42	45	43	21	p.
2409	June 28	56 10 45	161 09 15	42	44	43.5	21	gy. s.
2410	June 29	56 17 20	161 22 00	43	46	41	30	bk. s. g.
2411	June 29	56 24 10	161 37 00	42	45	40	37	gy. s.
2412	June 29	56 38 30	161 38 00	44	45	38.8	46	fne. gy. s.
2413	June 29	56 21 15	161 03 00	42	44	41	35	fne. gy. s. bk. sp
2414	June 29	56 10 15	160 42 30	45	46	.....	15	fne. gy. s.
2415	July 16	56 04 30	160 39 30	50	54	.....	8.5	fne. gy. s.
2416	July 16	56 09 45	160 33 00	48	54	.....	14.75	crs. bk. s.
2417	July 16	56 14 15	160 26 45	48	49	.....	12	bk. g.
2418	July 16	56 22 00	160 37 30	47	48	44	28	fne. gy. s.
2419	July 16	56 29 30	160 49 00	45	47	.....	37	fne. gy. s.
2420	July 17	56 36 30	161 00 30	45	46	41	38	fne. gy. s.
2421	July 17	56 44 15	161 12 30	44	46	40.5	38	fne. gy. s.
2422	July 17	56 52 15	160 58 00	44	46	40	40	fne. gy. s.
2423	July 17	56 33 20	159 43 30	44	45	.....	15	bk. s. g.
2424	July 17	56 40 40	159 54 30	43	45	.....	30	fne. gy. s. g.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Bering Sea.						
	1890.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
2425	July 17	56 48 00	160 05 30	42	42	-------	35	crs. bk. s.
2426	July 17	56 55 30	160 17 30	42	43	38	36	gy. s.
2427	July 17	57 03 20	160 29 00	41	43	-------	39	bk. s.
2428	July 17	57 10 30	160 15 00	41	43	38	38	bk. s.
2429	July 17	57 04 20	160 00 00	41	43	38.5	34	fne. gy. s. bk. sp.
2430	July 18	56 57 45	159 46 00	40	42	-------	34	gy. s.
2431	July 18	56 57 00	159 31 00	40	43	41	30	bk. g.
2432	July 18	57 06 20	159 23 00	42	46	40	31	gy. s. g.
2433	July 18	57 21 30	159 46 30	43	44	40	32	bk. s. g.
2434	July 18	57 23 15	159 17 00	43	44	40	31	fne. gy. s.
2435	July 18	57 10 15	158 49 00	41	43	41.6	25	gy. s.
2436	July 18	57 07 30	158 42 30	41	43	-------	20	s.
2437	July 18	57 05 45	158 39 00	41	44	-------	17	s.
2438	July 19	57 05 30	158 37 30	41	44	-------	12¾	bk. s.
2439	July 19	57 48 30	158 48 00	45	48	43.5	24	gy. s.
2440	July 19	57 45 15	157 56 00	46	50	-------	13	fne. gy. s.
2441	July 20	57 56 45	158 17 00	47	50	40.4	20	gy. s. bk. sp.
2442	July 20	58 00 30	159 13 30	51	55	44.2	21	bk. s.
2443	July 20	58 01 00	159 33 15	49	55	45	23	gy. s.
2444	July 20	58 24 00	160 17 30	49	53	-------	6½	gy. s. g.
2445	July 21	57 59 00	160 24 45	49	50	40.1	26	fne. gy. s.
2446	July 21	57 32 40	160 00 00	48	47	41	29	fne. gy. s.
2447	July 21	57 39 00	160 39 30	50	52	39.5	31	fne. gy. s.
2448	July 21	57 50 40	160 57 00	50	52	39.8	27	fne. gy. s.
2449	July 21	58 10 20	161 24 30	47	49	40.6	23	fne. bk. s.
2450	July 21	58 14 20	161 30 30	47	49	40.2	22	fne. gy. s. g.
2451	July 22	58 05 00	161 52 15	46	49	41	31	fne. gy. s.
2452	July 22	57 38 15	161 28 30	47	50	41.2	30	fne. gy. s.
2453	July 22	57 31 20	161 23 00	47	51	-------	32	gy. s.
2454	July 22	57 11 15	161 05 00	45	50	41.8	29	dk. s.
2455	July 22	56 57 30	160 52 30	45	48	41	38	fne. gy. s.
2456	July 22	56 31 15	160 23 30	45	49	-------	32	gy. s. g.
2457	July 22	56 27 45	160 25 30	46	49	-------	30	fne. gy. s.
2458	July 22	56 25 20	160 23 30	46	50	-------	22	g.
2459	July 22	56 22 45	160 21 30	46	50	-------	20	fne. gy. s.
2460	July 29	56 05 30	161 02 00	53	51	-------	18	g.
2461	July 29	55 55 15	161 15 00	49	51	-------	14	g.
2462	Aug. 2	54 02 45	166 33 00	47	50	-------	61	bk. s. g.
2463	Aug. 2	54 03 00	166 52 30	48	48	43	365	gn. m.
2464	Aug. 2	54 01 40	167 09 00	48	48	36.2	802	gn. m.
2465	Aug. 2	53 58 40	167 35 00	48	50	35.8	885	m.
2466	Aug. 2	53 54 10	167 52 00	48	51	36.7	643	bk. s. g.
2467	Aug. 2	55 53 00	167 56 00	48	51	37	578	fne. bk. s.
2468	Aug. 3	54 43 00	171 16 00	50	52	35	1,745	gn. oz.
2469	Aug. 3	55 31 00	171 42 00	48	51	35	1,818	gn. oz.
2470	Aug. 4	56 51 00	172 28 00	46	50	38.5	69	gn. m.
2471	Aug. 4	57 00 30	173 25 00	46	50	38.2	314	gn. m.
2472	Aug. 4	57 19 30	174 07 00	45	50	37.5	445	gn. m.
2473	Aug. 5	57 46 00	174 35 00	47	50	35	1,740	gn. oz.
2474	Aug. 5	58 14 00	174 35 00	47	50	35.8	977	fne. dk. s.
2475	Aug. 5	58 43 00	174 33 00	47	50	38	144	fne. dk. s.
2476	Aug. 6	56 50 00	175 15 00	46	50	35	1,887	gn. oz.
2477	Aug. 6	56 02 10	175 35 00	48	50	34.9	1,998	gn. oz.
2478	Aug. 7	55 17 00	175 32 00	46	50	35	2,036	gn. oz.
2479	Aug. 7	54 30 30	175 32 00	48	49	35	2,147	gn. oz.
2480	Aug. 7	53 42 00	175 33 00	49	50	35	2,053	bn. oz.
2481	Aug. 15	53 56 02	166 27 05	50	54	-------	25	fne. gy. s.
2482	Aug. 15	53 57 32	166 30 20	50	54	41	79	fne. s. sh. m.
2483	Aug. 15	53 58 06	166 31 26	50	54	40.8	95	fne. s. m.
2484	Aug. 15	53 58 50	166 33 10	50	54	41.6	118	fne. s. bn. m.
2485	Aug. 15	53 59 18	166 34 27	50	54	42.3	53	fne. dk. s.
2486	Aug. 15	53 59 42	166 35 29	56	54	45.8	22	rd. and bk. g.
2487	Aug. 15	53 59 47	166 33 48	56	52	41.3	71	fne. s. m.
2488	Aug. 15	53 59 42	166 31 44	56	52	40.6	99	fne. s. m.
2489	Aug. 15	53 59 26	166 28 00	56	56	41.3	66	fne. s. m.
2490	Aug. 15	54 00 08	166 24 14	57	55	44.3	37	g. sh. p.
2491	Aug. 15	54 01 23	166 23 37	60	55	44.5	40	fne. g.
2492	Aug. 15	54 01 29	166 25 08	60	55	42.5	57	fne. s. g.
2493	Aug. 15	54 01 59	166 29 32	55	55	40.9	103	fne. bk. s.
2494	Aug. 15	54 02 13	166 30 50	55	55	40.9	97	bk. s.
2495	Aug. 15	54 02 24	166 35 19	56	55	40	77	bk. s. sh.
2496	Aug. 15	54 02 50	166 37 00	56	55	42.1	58	bk. s. g. sh.
2497	Aug. 15	54 04 30	166 40 00	56	55	38.3	322	bk. s.
2498	Aug. 15	54 02 00	166 42 00	53	54	-------	148	bk. s.
2499	Aug. 15	54 00 45	166 40 30	53	54	44.5	37	bk. s.
2500	Aug. 16	54 00 25	166 46 00	62	53	44	52	bk. s. g.
2501	Aug. 16	54 00 25	166 48 00	59	54	39	179	bk. s.
2502	Aug. 16	53 59 30	166 48 30	60	54	43.5	50	bk. s.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Bering Sea.						
	1890.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2503	Aug. 16	53 58 50	166 51 30	60	54	44.1	22	sh.
2504	Aug. 16	54 00 00	166 58 00	60	52	38.2	316	gn. m.
2505	Aug. 16	53 56 30	167 03 00	60	54	46	36	fne. rd. and bk. s.
2506	Aug. 16	53 55 40	167 06 20	60	54	40.9	97	bk. s. sh. g.
2507	Aug. 16	53 52 35	167 09 00	60	54	46	22	gy. s.
2508	Aug. 16	53 52 00	167 12 15	54	53	44	40	r. g.
2509	Aug. 16	53 52 00	167 14 00	59	52	39	166	bk. m.
2510	Aug. 16	53 50 25	167 13 00	59	52	43	55	bk. g.
2511	Aug. 16	53 50 15	167 15 00	59	52	42	59	bk. g.
2512	Aug. 16	53 50 05	167 16 15	59	52	38.8	106	bk. s. g.
2513	Aug. 16	53 50 05	167 07 20	54	52	44.1	47	bk. s. g.
2514	Aug. 18	53 43 50	167 00 00	50	52	-------	103	bk. m.
2515	Aug. 18	53 43 05	167 02 30	49	50	40.3	109	dk. gn. m.
2516	Aug. 18	53 43 00	167 09 00	49	50	-------	62	bk. s. m.
2517	Aug. 18	53 41 45	167 16 00	49	48	43	54	s. g.
2518	Aug. 18	53 42 00	167 21 30	49	48	-------	58	bk. s. m.
2519	Aug. 18	53 41 45	167 27 20	49	50	40	69	bk. s.
2520	Aug. 18	53 41 00	167 33 25	51	52	38	394	gn. m.
2521	Aug. 18	53 36 30	167 23 25	50	50	42.4	43	crs. bk. s.
2522	Aug. 18	53 30 40	167 11 40	51	50	43.9	32	bk. s.
2523	Aug. 18	53 30 25	167 17 30	51	50	42.9	37	bk. s.
2524	Aug. 18	53 30 55	167 31 10	50	50	41.5	44	bk. s.
2525	Aug. 18	53 32 55	167 36 50	48	47	39 5	136	bk. s. m.
2526	Aug. 18	53 37 00	167 41 50	47	47	37	524	gn. m.
2527	Aug. 19	53 37 30	167 43 50	45	45	38.5	247	gn. m.
2528	Aug. 19	53 30 55	167 36 20	45	45	41.5	49	bk. s. m.
2529	Aug. 19	53 28 25	167 33 40	45	45	41.8	43	bk. s.
2530	Aug. 19	53 24 30	167 34 05	46	46	42	42	bk. s. sh.
2531	Aug. 19	53 23 15	167 32 50	48	50	44.4	15	bk. s. g.
2532	Aug. 20	53 24 20	167 37 05	48	48	42	60	bk. s. g.
2533	Aug. 20	53 23 30	167 39 25	48	48	42.3	47	g. sh.
2534	Aug. 20	53 23 30	167 42 40	48	48	42.1	39	bk. g. sh.
2535	Aug. 20	53 24 00	167 46 10	47	48	42.9	30	bk. s.
2536	Aug. 20	53 25 20	167 48 20	47	48	42.1	37	bk. s.
2537	Aug. 20	53 28 15	167 45 50	47	48	42.2	35	bk. s. g.
2538	Aug. 20	53 31 45	167 43 45	47	48	41.5	43	bk. s.
2539	Aug. 20	53 48 00	167 24 00	48	47	38	624	bn. m.
2540	Aug. 22	53 53 45	166 30 05	46	48	-------	19	m.
2541	Aug. 22	53 54 00	166 29 30	46	48	-------	17	gn. m.
2542	Aug. 22	53 55 35	166 27 45	46	48	-------	19	s. m.
2543	Aug. 22	53 56 00	166 28 30	47	48	43.3	35	fne. gy. s.
2544	Aug. 22	53 56 45	166 30 15	47	48	41.8	63	fne. s. m.
2545	Aug. 22	53 57 30	166 32 15	47	47	41.1	65	fne. s. m.
2546	Aug. 22	53 58 45	166 34 25	47	48	-------	23	bk. g.
2547	Aug. 22	53 58 20	166 34 45	50	50	-------	17	bk. s.
2548	Aug. 22	53 58 05	166 34 10	50	50	41.8	54	fne. bk. s.
2549	Aug. 22	53 55 55	166 33 55	50	52	42.4	45	fne. bk. s.
2550	Aug. 22	53 55 05	166 34 35	54	54	43.3	47	bn. m.
2551	Aug. 22	53 54 15	166 35 55	54	54	42.1	58	bn. m.
2552	Aug. 22	53 53 20	166 36 20	54	54	-------	13	crs. bk. s.
2553	Aug. 26	54 02 15	166 11 20	46	47	34.3	41	r.
2554	Aug. 26	54 00 25	166 05 40	46	47	45.7	26	sh. r.
		North Pacific off Alaska.						
2555	Aug. 26	53 59 00	165 57 20	54	46	44.9	48	g.
2556	Aug. 27	53 58 00	162 37 00	60	55	37.8	619	gn. m.
2557	Aug. 27	54 01 00	161 42 30	59	53	38.1	542	r.
2558	Aug. 27	54 11 00	160 37 00	52	52	36.6	756	gn. m.
2559	Aug. 29	55 41 00	154 48 00	54	51	37.9	494	gn. m. s.
2560	Aug. 29	56 00 00	153 30 00	53	52	39.5	207	m.
2561	Aug. 29	56 00 00	152 56 00	54	52	35.5	1,152	gn. m.
2562	Aug. 30	56 00 30	152 26 00	55	54	34.9	2,197	bl. m.
2563	Aug. 30	56 01 00	152 26 00	55	54	34.5	2,620	gn. m.
2564	Aug. 30	56 01 00	151 00 00	54	53	35.1	2,935	bn. m. s. oz.
2565	Aug. 30	56 02 00	150 38 00	54	54	35.3	2,925	gy. oz.
2566	Aug. 30	55 59 30	149 44 00	54	54	34.9	2,776	gy. oz.
2567	Aug. 31	55 54 00	147 57 00	54	54	35.1	2,414	bn. m.
2568	Aug. 31	55 49 00	144 57 00	55	54	35.1	2,132	gy. oz.
2569	Sept. 1	54 53 00	141 06 00	57	56	35.1	1,963	gy. oz. bk. s.
2570	Sept. 2	54 22 00	137 24 00	56	56	35.3	1,655	lt. bn. oz.
2571	Sept. 3	53 06 30	133 53 30	57	57	35.3	1,566	oz. bn. m. s.
		Off west coast of United States.						
2572	Sept. 24	40 26 00	124 29 45	53	51	50.4	26	bk. g. p.
2573	Sept. 24	40 27 40	124 33 00	53	52	49.6	52	dk. m. s.
2574	Sept. 24	40 27 45	124 36 55	53	52	44.8	226	bk. s. m.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off west coast of United States.						
	1890.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2575	Sept. 24	40 24 35	124 37 40	53	52	39.8	489	gn. m.
2576	Sept 24	40 23 50	124 33 30	55	54	42.6	337	gn. m. s.
2577	Sept. 24	40 13 30	124 25 45	58	52	49.6	55	r. g. sh.
2578	Sept. 24	40 00 30	124 06 30	56	52	52.7	23	fne. gy. s.
2579	Sept. 24	39 55 45	124 10 45	55	52	-------	184	gn. m.
2580	Sept. 24	39 51 25	124 07 50	55	53	47.6	159	fne. gy. s.
2581	Sept. 24	39 52 05	124 06 00	55	53	48	80	crs. g.
2582	Sept. 24	39 47 30	124 03 00	55	54	47.6	110	bk. s. m.
2583	Sept. 24	39 46 25	124 05 50	55	54	43.6	263	gn. m.
2584	Sept. 24	39 42 00	124 03 00	54	54	43.4	270	gn. m.
2585	Sept. 24	39 43 25	123 59 10	55	53	-------	93	gn. m.
2586	Sept. 24	39 44 00	123 57 40	55	53	-------	81	gn. m.
2587	Sept. 24	39 38 05	123 58 30	55	53	47.6	102	gn. m.
2588	Sept. 24	39 37 15	124 00 55	55	53	44.1	246	gn. m.
2589	Sept. 24	39 32 15	123 59 00	55	53	44.6	226	gn. m.
2590	Sept. 25	39 32 05	123 56 50	55	53	46.4	140	s. m.
2591	Sept. 25	39 27 00	123 57 25	54	53	48	82	fne. s. bk. g.
2592	Sept. 25	39 27 00	123 58 30	54	53	46.4	157	m.
2593	Sept. 25	39 27 00	124 00 00	54	53	44.3	234	m.
2594	Sept. 25	39 22 00	124 00 00	54	53	43.7	238	m.
2595	Sept. 25	39 22 00	123 58 00	54	53	47	132	fne. s. m.
2596	Sept. 25	39 22 00	123 56 05	54	53	48.4	77	m.
2597	Sept. 25	39 17 15	123 55 55	54	53	48.5	77	fne. s. m.
2598	Sept. 25	39 16 50	123 57 45	54	53	47.6	86	m.
2599	Sept. 25	39 16 10	123 58 35	54	55	47.6	161	gn. m.
2600	Sept. 25	39 11 05	123 59 00	54	55	46.4	183	gn m.
2601	Sept. 25	39 12 20	123 56 00	54	54	47.6	77	gn. m.
2602	Sept. 25	39 13 10	123 54 00	54	54	48.1	69	gn. m.
2603	Sept. 25	39 13 50	123 52 30	54	54	44.6	64	gn. m.
2604	Sept. 25	39 12 10	123 50 50	53	54	49.4	60	gn. m.
2605	Sept. 25	39 09 30	123 49 00	53	54	49.6	54	gn. m.
2606	Sept. 25	39 08 10	123 52 30	53	54	46.1	59	gn. m.
2607	Sept. 25	39 07 50	123 56 00	53	54	48.6	71	gn. m.
2608	Sept. 25	39 06 30	123 59 30	53	54	45.5	199	gn. m.
		Off west coast of South America and Mexico.						
	1891.							
2609	Feb. 23	7 12 30	80 56 00	79	81	57.7	127	g. s. sh.
2610	Feb. 28	5 29 30	86 49 30	81	82	37.2	1,009	glob. oz.
2611	Feb. 28	5 35 10	86 57 10	84	83.6	58.2	82	r.
2612	Mar. 1	5 28 20	86 55 30	78	82	57.2	94	fne. wh. s.
2613	Mar. 5	3 50 09	81 44 20	77	77	36.5	1,181	bn. glob. oz.
2614	Mar. 8	7 34 35	79 18 20	76	74	49.8	226	s. sh.
2615	Mar. 8	7 36 20	79 18 10	76	74	53.8	191	crs. gy. s.
2616	Mar. 8	7 38 10	79 18 00	77	74	50.3	151	gy. s.
2617	Mar. 11	7 26 40	78 52 40	72	70	36	1,681	r.
2618	Mar. 11	7 27 10	78 46 40	71	69	36	1,708	gn. glob. oz.
2619	Mar. 11	7 31 00	78 42 30	72	68	36.5	1,100	gn. glob. oz.
2620	Mar. 11	7 29 00	78 43 30	76	70	36	1,482	gn. glob. oz.
2621	Mar. 11	7 30 00	78 40 30	77	70	36.5	1,104	gn. m.
2622	Mar. 23	1 27 10	80 02 10	78	79	40.1	809	sft. m.
2623	Mar. 23	1 21 30	80 01 40	78	78	39.2	750	gn. oz.
2624	Mar. 23	1 18 00	80 01 00	77	80	39	724	gn. oz.
2625	Mar. 23	1 11 00	79 59 30	78	80	41.2	536	gn. m.
2626	Mar. 23	1 07 00	79 59 00	79	80	57.3	90	gn. m. s.
2627	Mar. 25	0 36 00	82 45 00	80	81	36	1,832	gn. glob. oz.
		South.						
2628	Mar. 26	0 13 00	84 52 00	81	81	-------	-------	
2629	Mar. 26	0 20 00	85 08 00	85	83	36	1,488	glob. oz.
		North.						
2630	Apr. 4	1 24 30	91 38 00	82	83	36.2	1,270	glob. oz.
2631	Apr. 11	16 20 00	99 41 30	77	80	35.8	1,823	yl. s. bk. sp.
2632	Apr. 12	16 42 00	100 11 00	79	80	38.5	838	gn. m.
2633	Apr. 12	16 45 00	100 06 00	82	82	37	912	dk. gn. m.
2634	Apr 12	16 46 30	100 02 30	81	82	40	602	dk. gn. m
2635	Apr. 18	20 47 15	106 15 30	72	74	36	2,022	dk. gn. m.
2636	Apr. 18	21 03 00	106 21 30	73	74	35.8	2,102	gn. oz. bk. sp.
2637	Apr. 22	27 20 00	110 54 00	72	71	38	773	bn. m. bk. sp.
2638	Apr. 23	27 38 00	111 04 00	72	72	39.2	622	bn. m. bk. sp.
		Off Alaska.						
2639	Aug. 3	57 07 00	170 27 00	49	46	-------	31	bk. p. sh.
2640	Aug. 3	57 15 00	170 40 00	47	46	-------	42	rky.
2641	Aug. 11	53 59 00	166 38 30	50	48	-------	24	bk. g. brk. sh

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		West coast United States.						
	1891.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2642	Aug. 28	48 24 30	124 37 30	63	52	.....	78	p.
2643	Aug. 28	48 26 00	124 37 20	63	52	.....	144	br. m.
2644	Aug 28	48 28 05	124 36 55	63	52	.....	137	gy. s. g.
2645	Aug. 29	48 24 25	124 37 45	59	54	.....	59	g. s.
2646	Aug. 29	48 27 10	124 39 50	61	56	.....	140	g.
2647	Sept. 1	48 25 30	124 42 15	57	52	.....	74	r.
2648	Sept. 2	48 23 55	124 13 30	60	55	.....	93	s. p.
2649	Sept. 2	48 24 50	124 11 40	60	55	.....	73	gy. s.
2650	Sept. 2	48 25 30	124 08 00	61	56	.....	44	gy. s.
2651	Sept. 3	48 13 30	123 58 00	58	53	.....	64	sp.
2652	Sept. 3	48 18 00	123 49 40	59	53	.....	95	rky.
2653	Sept. 4	48 19 00	123 18 20	62	58	.....	55	gy. s. g. sh.
2654	Sept. 4	48 18 00	123 14 00	62	58	.....	19	rky.
		Cable Survey, California to Hawaiian Islands. a						
2655	Oct. 11	36 48 10	121 47 50	50	55	49	52	fne. bk. s.
2656	Oct. 11	36 48 14	121 47 38	50	55	.....	24.5	gn. m.
2657	Oct. 11	36 48 15	121 47 34	50	55	.....	20.25	gn. m.
2658	Oct. 11	36 48 16	121 47 30	50	55	.....	15.25	gn. m.
2659	Oct. 11	36 48 17	121 47 28	50	55	.....	12	gn. m.
2660	Oct. 11	36 48 18	121 47 26	50	55	.....	10	gn. m.
2661	Oct. 11	36 48 14	121 47 26	50	55	.....	9.75	gn. m.
2662	Oct. 11	36 48 10	121 47 25	50	55	.....	4.5	gn. m.
2663	Oct. 11	36 48 06	121 47 27	50	55	.....	7.5	gn. m.
2664	Oct. 11	36 48 03	121 47 28	50	55	.....	9	gn. m.
2665	Oct. 11	36 48 04	121 47 30	50	55	.....	15	gn. m.
2666	Oct. 11	36 48 05	121 47 34	50	55	.....	18.5	gn. m.
2667	Oct. 11	36 48 06	121 47 38	50	55	.....	23.5	gn. m.
2668	Oct. 11	36 48 10	121 47 50	52	55	.....	54	bk. m.
2669	Oct. 11	36 47 53	121 49 06	53	56	.....	75	gn. m.
2670	Oct. 11	36 47 34	121 50 20	53	57	47.5	124	gn. m.
2671	Oct. 11	36 47 16	121 51 20	53	56	.....	165	gn. m.
2672	Oct. 11	36 47 04	121 52 45	53	56	46.1	213	gn. m.
2673	Oct. 11	36 46 50	121 53 50	53	56	.....	266	br. m.
2674	Oct. 11	36 46 40	121 55 10	54	53	53.5	352	br. m. s.
2675	Oct. 11	36 46 25	121 56 30	54	53	.....	388	br. m. s.
2676	Oct. 11	36 46 15	121 57 30	54	53	39.5	442	fne. gy. s.
2677	Oct. 11	36 45 45	122 00 00	55	56	.....	377	gy. s.
2678	Oct. 11	36 45 25	122 02 30	55	55	39	618	br. m. s.
2679	Oct. 11	36 45 00	122 05 30	55	55	40	548	br. m. s.
2680	Oct. 11	36 44 40	122 09 30	55	55	37	868	br. m. s.
2681	Oct. 11	36 44 00	122 13 00	55	55	.....	486	gy. s.
2682	Oct. 11	36 43 00	122 17 00	55	55	38	663	br. m. s.
2683	Oct. 11	36 42 30	122 22 00	54	55	.....	770	br. m. s.
2684	Oct. 11	36 41 30	122 28 00	54	54	35.5	1,122	br. m. s.
2685	Oct. 11	36 39 30	122 41 00	55	55	35.1	1,424	br. m.
2686	Oct. 11	36 37 00	122 54 00	55	55	35	1,597	br. m.
2687	Oct. 12	36 35 00	123 06 00	55	55	35	1,661	br. m.
2688	Oct. 12	36 32 30	123 19 00	56	54	35	1,907	br. m. s.
2689	Oct. 12	36 30 30	123 32 00	55	55	35	1,983	(Lost cup.)
2690	Oct. 12	36 28 00	123 44 00	55	54	35	2,061	gy. oz.
2691	Oct. 12	36 25 30	124 02 50	57	56	34.8	2,112	gy. oz.
2692	Oct. 12	36 20 00	124 20 30	55	55	35	2,333	gy. oz.
2693	Oct. 12	36 14 30	124 37 30	59	56	35	2,330	gy. oz.
2694	Oct. 12	36 09 00	124 55 30	58	59	35	2,434	br. and gy. oz.
2695	Oct. 12	36 03 00	125 13 00	58	57	35	2,430	br. oz.
2696	Oct. 13	35 58 00	125 31 00	58	57	35	2,547	br. and gy. oz.
2697	Oct. 13	35 52 30	125 48 00	58	57	35	2,576	br. and gy. oz.
2698	Oct. 13	35 47 30	126 05 00	62	62	35	2,566	br. oz.
2699	Oct. 13	35 41 50	126 22 20	61	62	34.9	2,574	br. oz.
2700	Oct. 13	35 37 00	126 41 00	62	62	34.9	2,569	br. oz.
2701	Oct. 13	35 33 00	126 59 30	62	62	35	2,654	br. oz.
2702	Oct. 13	35 28 30	127 17 00	61	62	35	2,577	br. oz.
2703	Oct. 13	35 24 00	127 36 00	61	62	.....	2,533	bn. oz.
2704	Oct. 14	35 20 00	127 54 00	63	64	35	2,600	bn. oz.
2705	Oct. 14	35 15 30	128 12 00	63	64	.....	2,701	bn. oz.
2706	Oct. 14	35 11 30	128 29 00	65	65	35	2,666	bn. oz.
2707	Oct. 14	35 07 00	128 48 30	65	65	35	2,720	bn. oz.
2708	Oct. 14	35 03 30	129 05 00	67	66	35	2,645	bn. oz.
2709	Oct. 14	34 56 30	129 20 00	66	65	35	2,689	bn. oz.
2710	Oct. 14	34 49 00	129 37 00	65	65	.....	2,607	(Lost cup.)
2711	Oct. 14	34 42 00	129 52 30	64	65	.....	2,701	br. oz.
2712	Oct. 15	34 35 00	130 08 00	64	64	35.1	2,751	br. oz.
2713	Oct. 15	34 28 00	130 24 00	63	64	.....	2,768	br. oz.
2714	Oct. 15	34 21 00	130 40 00	66	65	.....	2,789	br. oz.

a Stations 2655 to 3202, Hawaiian Islands Cable Survey, numbered in Navy report 1 to 556.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Cable Survey, California to Hawaiian Islands.						
	1891.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2715	Oct. 15	34 14 00	130 56 00	67	65	35.4	2,869	br. oz.
2716	Oct. 15	34 07 30	131 12 00	66	65	.....	2,895	br. oz.
2717	Oct. 15	34 01 00	131 28 00	66	65	.....	2,791	br. oz.
2718	Oct. 15	33 54 30	131 45 00	66	65	35.4	2,772	br. oz.
2719	Oct. 15	33 48 30	132 01 00	66	66	.....	2,806	br. oz.
2720	Oct. 16	33 41 30	134 17 00	66	66	.....	2,793	br. oz.
2721	Oct. 16	33 35 00	132 33 30	65	66	35.3	2,832	br. oz.
2722	Oct. 16	33 28 30	132 50 00	65	67	.....	2,700	br. oz.
2723	Oct. 16	33 24 00	133 01 00	67	67	35.5	2,731	br. oz.
2724	Oct. 16	33 20 00	133 12 00	68	67	.....	2,661	br. oz.
2725	Oct. 16	33 15 30	133 24 00	68	67	.....	2,662	br. oz.
2726	Oct. 16	33 12 00	133 34 30	68	67	35.5	2,685	br. m.
2727	Oct. 16	33 08 00	133 46 00	67	66	.....	2,678	br. m.
2728	Oct. 16	33 04 30	133 56 30	67	67	.....	2,670	br. m. lava.
2729	Oct. 16	33 01 00	134 08 00	67	67	35.1	2,641	br. m. bk. sp.
2730	Oct. 16	32 57 30	134 18 30	67	66	.....	2,667	br. m.
2731	Oct. 17	32 54 00	134 30 00	67	68	.....	2,796	br. m.
2732	Oct. 17	32 50 00	134 40 30	67	68	35.2	2,834	br. m.
2733	Oct. 17	32 46 30	134 52 00	67	68	.....	2,461	br. m.
2734	Oct. 17	32 46 00	134 54 00	69	68	35.3	2,322	br. m. lava.
2735	Oct. 17	32 44 40	134 58 00	69	68	.....	2,014	lava.
2736	Oct. 17	32 44 00	135 00 00	69	68	.....	2,406	br. m. lava.
2737	Oct. 17	33 42 00	135 05 00	69	68	35.3	2,529	br. m.
2738	Oct. 17	32 41 30	135 07 20	69	68	.....	2,463	br. m.
2739	Oct. 17	32 39 30	135 12 00	70	69	.....	2,463	br. m.
2740	Oct. 17	32 35 30	135 22 00	70	69	35.2	2,375	br. oz.
2741	Oct. 17	32 31 00	135 33 00	69	69	35	2,739	br. oz.
2742	Oct. 17	32 27 00	135 43 30	69	69	.....	2,506	br. oz.
2743	Oct. 17	32 22 30	135 54 00	69	69	.....	2,442	br. oz.
2744	Oct. 17	32 18 00	136 04 30	69	69	34.9	2,276	br. oz.
2745	Oct. 18	32 14 00	136 15 00	68	69	.....	2,557	br. oz.
2746	Oct. 18	32 10 00	136 26 00	69	69	.....	2,492	(Lost cup.)
2747	Oct. 18	32 05 30	136 36 30	69	69	35	2,421	br. oz.
2748	Oct. 18	32 01 30	136 47 30	69	69	.....	2,417	br. oz.
2749	Oct. 18	31 57 00	136 58 30	62	69	.....	2,601	br. oz.
2750	Oct. 18	31 52 30	137 09 00	61	68	34.9	2,547	br. oz.
2751	Oct. 18	31 48 00	137 19 30	63	69	.....	2,654	br. oz.
2752	Oct. 18	31 43 00	137 30 30	65	69	.....	2,670	br. oz.
2753	Oct. 23	36 47 45	121 50 54	68	60	.....	136	gn. m.
2754	Oct. 23	36 47 40	121 52 10	68	60	.....	173	gn. m.
2755	Oct. 23	36 47 32	121 53 20	68	60	.....	223	gn. m.
2756	Oct. 23	36 47 25	121 54 35	68	60	.....	202	gn. m. s.
2757						Void.		
2758	Oct. 23	36 47 20	121 55 45	68	60	.....	277	gn. m.
2759	Oct. 23	36 47 10	121 57 05	63	60	.....	302	gn. m.
2760	Oct. 23	36 47 10	121 58 15	64	60	.....	255	gn. m.
2761	Oct. 23	36 47 10	121 59 30	63	60	.....	418	gn. m.
2762	Oct. 23	36 47 10	122 00 50	63	60	.....	562	gn. m.
2763	Oct. 23	36 47 10	122 02 05	60	59	39.4	495	gn. m.
2764	Oct. 23	36 47 10	122 03 20	60	59	.....	122	gy. s.
2765	Oct. 23	36 47 10	122 04 35	60	59	.....	441	gn. m. s.
2766	Oct. 23	36 47 10	122 05 50	60	58	.....	196	gn. m. s.
2767	Oct. 23	36 47 10	122 07 95	60	58	44.8	202	gn. m. s.
2768	Oct. 23	36 47 10	122 08 20	60	58	.....	373	gn. m. s.
2769	Oct. 23	36 47 10	122 09 35	59	58	.....	440	gn. m.
2770	Oct. 23	36 47 10	122 10 50	59	58	.....	271	fne. gy. s.
2771	Oct. 23	36 47 10	122 12 05	59	57	42	291	gn. m. s.
2772	Oct. 23	36 47 10	122 13 20	59	58	.....	343	gn. m. s.
2773	Oct. 23	36 47 10	122 14 35	59	57	.....	395	gn. m. s.
2774	Oct. 23	36 47 10	122 15 50	59	56	.....	469	gn. m. s.
2775	Oct. 23	36 47 10	122 17 05	58	56	37.7	607	gn. m. s.
2776	Oct. 23	36 46 10	122 18 20	58	57	.....	621	gn. m. s.
2777	Oct. 23	36 47 10	122 19 35	58	56	.....	979	gn. m. s.
2778	Nov. 7	33 07 00	133 46 15	66	68	.....	2,239	bn. m. lava
2779	Nov. 8	33 02 30	133 57 00	66	67	35.1	2,520	bn. m.
2780	Nov. 8	32 58 30	134 08 30	64	67	.....	2,648	bn. oz.
2781	Nov. 8	32 54 00	134 18 30	64	67	.....	2,512	bn. oz.
2782	Nov. 8	32 49 30	134 29 30	66	68	35.1	2,721	bn. oz.
2783	Nov. 8	32 45 00	134 40 00	66	68	.....	2,425	br. oz. bk. sp.
2784	Nov. 8	32 43 40	134 42 30	68	68	35.1	2,442	br. m. lava.
2785	Nov. 8	32 41 00	134 49 30	68	68	.....	2,415	br. m. lava.
2786	Nov. 8	32 40 00	134 51 30	69	68	35.1	2,482	br. m.
2787	Nov. 8	32 37 30	134 57 00	69	68	.....	2,564	br. oz.
2788	Nov. 8	32 35 00	135 03 00	69	68	.....	2,470	br. oz.
2789	Nov. 8	32 33 00	135 09 00	66	68	35.0	2,378	br. m. lava. sp.
2790	Nov. 8	32 30 30	135 15 00	64	67	.....	2,441	br. m.
2791	Nov. 9	32 26 00	135 26 30	64	67	.....	2,474	br. m.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Cable Survey, California to Hawaiian Islands.						
	1891.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2792	Nov. 9	32 21 30	135 38 00	64	67	.....	2,600	br. m.
2793	Nov. 9	32 17 00	135 49 00	65	67	35.1	2,413	br. m.
2794	Nov. 9	32 12 30	136 00 30	67	68	.....	2,619	br. oz.
2795	Nov. 9	32 08 00	136 11 30	68	68	.....	2,606	br. oz.
2796	Nov. 9	32 04 00	136 22 30	64	67	.....	2,484	(Lost cup.)
2797	Nov. 9	31 59 30	136 33 00	64	67	35.1	2,879	br. oz.
2798	Nov. 9	31 54 30	136 44 00	65	67	.....	3,186	(Lost cup.)
2799	Nov. 9	31 50 00	136 54 30	65	67	.....	2,504	br. oz.
2800	Nov. 9	31 45 30	137 05 00	68	68	35.1	2,591	br. oz.
2861	Nov. 10	31 41 00	137 15 30	68	69	.....	2,550	br. oz.
2802	Nov. 10	31 36 00	137 26 00	67	69	.....	2,629	br. oz.
2803	Nov. 10	31 31 30	137 36 30	67	69	.....	2,614	br. oz.
2804	Nov. 10	31 27 00	137 47 00	67	68	35.1	2,719	br. oz.
2805	Nov. 10	31 23 00	137 58 00	66	67	.....	2,700	br. oz.
2806	Nov. 10	31 18 30	138 08 30	70	69	.....	2,702	br. oz.
2807	Nov. 10	31 14 30	138 19 00	70	69	.....	2,587	br. oz.
2808	Nov. 10	31 10 00	138 29 30	70	70	35.1	2,546	br. oz.
2809	Nov. 10	31 05 00	138 40 00	68	70	.....	2,500	br. oz.
2810	Nov. 10	31 01 30	138 50 00	68	69	.....	2,412	br. oz.
2811	Nov. 10	30 57 30	139 00 30	68	69	35.1	2,072	br. oz. s.
2812	Nov. 11	30 56 30	139 02 30	69	69	.....	2,199	br. oz.
2813	Nov. 11	30 52 00	139 12 30	68	69	.....	2,749	br. oz.
2814	Nov. 11	30 48 00	139 23 00	68	69	35.1	2,567	br. oz.
2815	Nov. 11	30 44 00	139 34 00	68	69	.....	2,752	br. oz.
2816	Nov. 11	30 40 00	139 44 30	69	69	.....	2,646	br. oz. lava.
2817	Nov. 11	30 36 00	139 55 00	70	69	.....	2,723	br. oz. s.
2818	Nov. 11	30 31 30	140 05 30	71	69	.....	2,637	br. oz.
2819	Nov. 11	30 27 00	140 16 00	72	70	35.2	2,591	br. oz.
2820	Nov. 11	30 23 00	140 26 30	69	69	.....	2,650	br. oz.
2821	Nov. 11	30 18 00	140 38 30	69	69	.....	2,655	br. oz.
2822	Nov. 11	30 13 00	140 50 30	68	69	35	2,671	br. oz.
2823	Nov. 12	30 08 00	141 03 00	67	69	.....	2,691	br. oz.
2824	Nov. 12	30 03 00	141 15 00	68	69	.....	2,747	br. oz.
2825	Nov. 12	29 58 30	141 27 30	68	67	35.2	2,720	br. oz.
2826	Nov. 12	29 53 30	141 40 00	69	70	.....	2,723	br. oz.
2827	Nov. 12	29 48 30	141 52 00	69	70	35.2	2,738	br. oz.
2828	Nov. 12	29 43 00	142 04 30	72	70	.....	2,741	br. oz.
2829	Nov. 12	29 38 00	142 17 00	72	70	.....	2,791	br. oz.
2830	Nov. 12	29 31 30	142 32 00	71	70	35.4	2,820	br. oz.
2831	Nov. 12	29 25 00	142 47 00	71	70	.....	2,785	br. oz.
2832	Nov. 12	29 18 00	143 02 00	70	70	.....	2,827	br. oz.
2833	Nov. 13	29 11 30	143 17 30	71	72	.....	2,085	br. oz.
2834	Nov. 13	29 10 30	143 20 00	71	72	35.1	2,280	br. oz.
2835	Nov. 13	29 13 00	143 15 00	70	70	.....	2,379	br. oz.
2836	Nov. 13	29 15 00	143 09 30	70	70	.....	2,727	br. oz. lava
2837	Nov. 13	29 08 30	143 25 00	70	70	35.3	2,733	br. oz.
2838	Nov. 13	29 03 30	143 36 00	73	72	.....	2,744	br. oz.
2839	Nov. 13	28 58 00	143 48 00	72	72	.....	2,698	br. oz.
2840	Nov. 13	28 52 00	144 00 00	72	72	35.3	2,784	br. oz.
2841	Nov. 13	28 46 00	144 12 00	72	71	.....	2,510	br. oz.
2842	Nov. 13	28 45 00	144 14 00	72	71	.....	2,530	br. oz.
2843	Nov 13	28 39 30	144 25 30	71	71	35.2	2,719	br. oz.
2844	Nov. 13	28 33 30	144 37 00	70	71	.....	2,821	br. oz.
2845	Nov. 14	28 27 30	144 48 30	69	71	35.1	2,570	br. oz. lava.
2846	Nov. 14	28 26 30	143 50 30	69	71	.....	2,770	br. oz.
2847	Nov. 14	28 20 00	145 03 30	72	72	.....	2,801	br. oz.
2848	Nov. 14	28 12 20	145 13 00	72	72	.....	2,728	br. oz.
2849	Nov. 14	28 06 30	145 24 00	74	72	.....	2,707	br. oz.
2850	Nov. 14	28 00 30	145 35 00	73	73	.....	2,635	br. oz.
2851	Nov. 14	27 54 00	145 45 30	72	72	35.2	2,782	br. oz.
2852	Nov. 14	27 48 00	145 56 30	72	72	.....	2,848	br. oz.
2853	Nov. 15	27 42 00	146 07 30	72	73	.....	2,860	br. oz.
2854	Nov. 15	27 36 00	146 19 00	72	73	35.4	2,910	br. oz.
2855	Nov. 15	27 30 00	146 30 00	72	73	.....	2,914	br. oz.
2856	Nov. 15	27 24 00	146 41 00	72	73	.....	2,837	br. oz.
2857	Nov. 15	27 18 00	146 51 30	73	73	35.2	2,629	br. oz.
2858	Nov. 15	27 12 00	147 02 40	75	74	.....	2,795	br. oz.
2859	Nov. 15	27 06 00	147 14 00	75	74	.....	2,929	br. oz.
2860	Nov. 15	27 00 00	147 25 30	75	74	35.3	2,815	br. oz.
2861	Nov. 15	26 54 00	147 36 30	72	74	.....	2,898	br. oz.
2862	Nov. 15	26 48 00	147 47 30	72	74	.....	2,896	br. oz.
2863	Nov. 15	26 42 00	147 59 00	71	74	35.3	2,925	br. oz.
2864	Nov. 16	26 35 30	148 10 00	71	74	.....	2,894	br. oz.
2865	Nov. 16	26 29 00	148 21 30	71	74	.....	2,942	br. oz.
2866	Nov. 16	26 23 00	148 33 00	72	74	35.3	2,985	br. oz.
2867	Nov. 16	26 17 00	148 44 00	73	75	.....	3,003	br. oz.
2868	Nov. 16	26 10 15	148 55 00	73	75	.....	2,864	br. oz.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Cable Survey, California to Hawaiian Islands.						
	1891.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2869	Nov. 16	26 04 30	149 06 30	75	75	35.3	2,992	br. oz.
2870	Nov. 16	25 58 00	149 18 30	74	75	.....	3,039	br. oz.
2871	Nov. 16	25 52 00	149 30 00	74	75	.....	3,008	br. oz.
2872	Nov. 16	25 46 00	149 41 30	74	75	35.3	2,982	br. oz.
2873	Nov. 17	25 39 30	149 53 00	74	74	.....	3,037	br. oz.
2874	Nov. 17	25 33 00	150 05 00	73	74	.....	2,993	br. oz.
2875	Nov. 17	25 26 30	150 16 30	73	74	35.4	3,027	br. oz.
2876	Nov. 17	25 20 00	150 28 00	73	74	.....	3,073	(Lost cup.)
2877	Nov. 17	25 14 00	150 39 00	73	74	.....	2,952	br. oz.
2878	Nov. 17	25 08 00	150 50 00	75	75	35.3	2,910	br. oz.
2879	Nov. 17	25 02 00	151 01 00	75	75	.....	2,978	br. oz.
2880	Nov. 17	24 56 00	151 13 00	75	75	.....	2,910	br. oz.
2881	Nov. 17	24 50 00	151 24 30	74	75	35.4	2,985	br. oz.
2882	Nov. 17	24 43 30	151 36 00	74	75	.....	2,936	br. oz.
2883	Nov. 18	24 37 00	151 47 30	75	75	.....	3,023	br. oz. lava.
2884	Nov. 18	24 31 00	151 59 30	75	76	35.3	2,917	br. oz.
2885	Nov. 18	24 24 30	152 11 30	76	76	.....	2,959	br. oz.
2886	Nov. 18	24 18 00	152 22 30	76	76	.....	2,950	(No specimen; defective cup.)
2887	Nov. 18	24 11 30	152 34 00	76	76	35.4	2,953	br. oz.
2888				Void.				
2889	Nov. 18	24 06 00	152 46 00	76	76	.....	2,907	br. oz. s.
2890	Nov. 18	24 00 30	152 57 00	76	76	.....	2,864	br. oz. s.
2891	Nov. 18	23 55 00	153 08 30	76	76	35.4	2,811	br. oz.
2892	Nov. 18	23 49 00	153 20 00	75	74	.....	2,801	(No specimen; defective cup.)
2893	Nov. 18	23 43 00	153 31 30	75	74	.....	2,748	br. oz.
2894	Nov. 19	23 37 30	153 43 00	75	75	35.3	2,627	(No specimen; defective cup.)
2895	Nov. 19	23 32 00	153 54 00	75	76	.....	2,610	br. oz.
2896	Nov. 19	23 26 00	154 06 00	76	76	35.3	2,600	br. oz.
2897	Nov. 19	23 20 00	154 17 30	76	76	.....	2,453	br. oz.
2898	Nov. 19	23 14 30	154 28 30	76	76	.....	1,265	br. oz.
2899	Nov. 19	23 13 30	154 30 00	76	76	35.4	1,531	br. oz.
2900	Nov. 19	23 15 30	154 27 00	77	76	.....	1,663	br. oz.
2901	Nov. 19	23 17 30	154 23 30	78	77	.....	2,502	br. oz.
2902	Nov 19	23 11 00	154 34 00	78	77	35.5	1,783	gy. oz.
2903	Nov. 19	23 05 00	154 42 30	78	77	.....	2,411	(No specimen; defective cup.)
2904	Nov. 19	23 00 30	154 51 00	77	77	.....	2,464	br. oz.
2905	Nov. 19	22 55 30	154 59 00	77	77	35.3	2,368	br. oz. lava.
2906	Nov. 20	22 49 30	155 09 00	76	76	.....	2,420	br. oz.
2907	Nov. 20	22 43 30	155 18 30	75	76	.....	2,272	br. oz.
2908	Nov. 20	22 42 30	155 20 30	75	76	35.5	2,341	br. oz.
2909	Nov. 20	22 36 30	155 30 30	75	76	.....	2,408	br. oz.
2910	Nov. 20	22 30 00	155 40 00	75	76	.....	2,426	br. oz.
2911	Nov. 20	22 24 30	155 49 00	75	76	32.4	2,468	br. oz.
2912	Nov. 20	22 18 00	155 58 30	77	77	.....	2,542	br. m.
2913	Nov. 20	22 11 00	156 09 00	77	77	35.4	2,640	br. m.
2914	Nov. 20	22 03 30	156 19 00	78	77	.....	2,766	br. m.
2915	Nov. 20	21 55 30	156 29 30	78	77	.....	2,868	br. m.
2916	Nov. 20	21 47 30	156 39 00	77	77	35.3	2,878	br. m.
2917	Nov. 21	21 39 00	156 48 30	76	77	.....	2,615	br. m. fne. s.
2918	Nov. 21	21 37 30	156 50 00	76	77	.....	2,576	br. m. fne. s.
2919	Nov. 21	21 29 30	156 59 30	75	77	35.5	2,056	br. m. fne. s.
2920	Nov. 21	21 21 00	157 09 00	76	77	.....	570	br. m. fne. s.
2921	Nov. 21	21 19 00	157 13 30	76	77	.....	347	br. m. fne. s.
2922	Nov. 21	21 18 30	157 19 00	76	77	44.8	268	gy. s.
2923	Nov. 21	21 18 00	157 24 30	77	78	.....	392	gy. s.
2924	Nov. 21	21 16 48	157 30 00	77	78	.....	301	gy. s. co.
2925	Nov. 21	21 15 24	157 35 05	77	78	.....	105	gy. s. co.
2926	Nov. 21	21 13 38	157 39 32	78	78	43.8	304	fne. wh. s.
2927	Nov. 21	21 12 50	157 44 32	78	78	.....	293	m.
2928	Nov. 21	21 13 00	157 50 20	78	78	.....	295	fne. wh. s.
2929	Dec. 2	21 15 13	157 50 58	79	78	.....	10	(No specimen.)
2930	Dec. 2	21 15 30	157 40 56	76	75	.....	22	wh. s. co.
2931	Dec. 2	21 15 20	157 40 28	76	75	.....	47	s. brk. sh.
2932	Dec. 2	21 14 59	157 40 10	76	75	.....	189	fne. wh. s.
2933	Dec. 2	21 14 38	157 39 53	76	75	.....	276	wh. s.
2934	Dec. 2	21 14 16	157 39 40	76	75	.....	285	fne. wh. s.
2935	Dec. 2	21 14 02	157 39 28	76	75	.....	303	s. co.
2936	Dec. 2	21 13 55	157 41 23	76	75	.....	255	fne. wh. s. lava.
2937	Dec. 2	21 14 06	157 42 42	76	75	.....	47	wh. s. co.
2938	Dec. 2	21 14 30	157 43 24	76	75	.....	142	fne. wh. s.
2939	Dec. 2	21 14 56	157 44 05	76	75	.....	21	wh. s. sh. co.
2940	Dec. 2	21 15 32	157 44 32	76	75	.....	10	wh. s.
2941	Dec. 2	21 15 49	157 44 27	76	75	.....	7	wh. s.
2942	Dec. 3	21 15 54	157 44 22	74	77	.....	7½	wh. s.
2943	Dec. 3	21 15 57	157 44 20	74	77	.....	7½	wh. s.
2944	Dec. 3	21 16 01	157 44 17	74	77	.....	6½	wh. s.
2945	Dec. 3	21 16 05	157 44 14	74	77	.....	6	wh. s.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Cable Survey, California to Hawaiian Islands						
	1891.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
2946	Dec. 3	21 16 08	157 44 10	74	77	.....	4.25	wh. s.
2947	Dec. 3	21 16 11	157 44 06	74	77	.....	4	wh. s.
2948	Dec. 3	21 16 14	157 44 01	74	77	.....	5	wh. s.
2949	Dec. 3	21 16 18	157 43 56	74	77	.....	2.75	wh. s.
2950	Dec. 3	21 15 40	157 43 47	75	77	.....	7.5	wh. s. sh. co.
2951	Dec. 3	21 15 48	157 43 49	76	77	.....	7.5	wh. s.
2952	Dec. 3	21 15 56	157 43 50	76	77	.....	6	wh. s.
2953	Dec. 3	21 16 04	157 43 51	76	77	.....	5.25	wh. s.
2954	Dec. 3	21 16 12	157 43 52	76	77	.....	3.25	wh. s.
2955	Dec. 3	21 16 19	157 43 55	76	77	.....	2.25	wh. s.
2956	Dec. 3	21 15 08	157 43 46	75	76	.....	13	wh. s. co.
2957	Dec. 3	21 14 37	157 43 45	75	76	.....	53	wh. s. co.
2958	Dec. 3	21 14 06	157 43 43	75	76	.....	222	fne. wh. s.
2959	Dec. 3	21 13 30	157 43 40	75	76	45.3	275	fne. wh. s.
2960	Dec. 3	21 15 49	157 41 23	76	76	.....	10.5	rky.
2961	Dec. 3	21 15 52	157 41 28	76	76	.....	7.25	bk. s.
2962	Dec. 3	21 15 54	157 41 32	76	76	.....	6	bk. s.
2963	Dec. 3	21 15 57	157 41 37	76	76	.....	3.75	rky.
2964	Dec. 3	21 15 58	157 41 40	76	76	.....	2.25	wh. s. p.
2965	Dec. 3	21 15 40	157 43 47	76	76	.....	7	wh. s. co.
2966	Dec. 3	21 15 08	157 51 01	76	75	.....	12.5	wh. s. co.
2967	Dec. 3	21 15 13	157 50 58	76	75	.....	10.25	wh. s.
2968	Dec. 3	21 15 17	157 50 46	76	75	.....	8.75	wh. s.
2969	Dec. 3	21 15 18	157 50 39	76	75	.....	7	wh. s.
2670	Dec. 3	21 15 21	157 50 31	76	75	.....	2.75	wh. s.
2971	Dec. 3	21 15 24	157 50 27	76	75	.....	2	wh. s. co.
2972	Dec. 3	21 15 27	157 50 22	76	75	.....	2	wh. s. co.
2973	Dec. 3	21 15 22	157 51 48	75	76	.....	7.25	co.
2974	Dec. 3	21 15 23	157 50 43	75	76	.....	5	wh. s.
2975	Dec. 3	21 15 24	157 50 39	75	76	.....	3	wh. s.
2976	Dec. 3	21 15 25	157 50 32	75	76	.....	2	wh. s.
2977	Dec. 3	21 16 09	157 50 38	75	75	.....	0.75	wh. s.
2978	Dec. 3	21 15 59	157 50 42	75	75	.....	2.75	wh. s.
2979	Dec. 3	21 15 52	157 50 44	75	75	.....	3.75	wh. s.
2980	Dec. 3	21 15 46	157 50 46	75	75	.....	5	wh. s.
2981	Dec. 3	21 15 40	157 50 49	75	75	.....	4.25	wh. s.
2982	Dec. 3	21 15 35	157 50 51	75	75	.....	5.75	wh. s.
2983	Dec. 3	21 15 30	157 50 54	76	76	.....	7.25	co.
2984	Dec. 3	21 14 53	157 51 10	77	76	.....	50	wh. s. bk. sp.
2985	Dec. 3	21 14 27	157 51 22	77	76	.....	206	fne. wh. s.
2986	Dec. 3	21 13 57	157 51 29	77	76	.....	271	fne. wh. s.
2987	Dec. 3	21 13 17	157 48.29	77	76	48.1	224	fne. wh. s.
2988	Dec. 3	21 13 32	157 48 52	77	76	.....	133	wh. s. sh. co.
2989	Dec 3	21 13 48	157 49 29	77	76	.....	164	wh. s. co.
2990	Dec. 3	21 14 00	157 49 58	77	76	50.4	201	fne. wh. s.
2991	Dec. 4	21 14 26	157 50 49	77	76	.....	252	fne. wh. s.
2992	Dec. 4	21 14 40	157 51 17	77	76	.....	153	fne. wh. s.
2993	Dec. 5	21 14 30	157 34 30	76	76	.....	153	fne. wh. s. co.
2994	Dec. 5	21 15 00	157 33 00	76	76	44.3	305	fne. wh s.
2995	Dec. 5	21 18 00	157 29 00	76	76	.....	308	fne. wh. s.
2996	Dec. 5	21 20 30	157 25 00	76	76	.....	407	fne. gy. s.
2997	Dec. 5	21 23 30	157 21 00	77	76	50.7	372	gy. s. co.
2998	Dec. 5	21 26 00	157 17 00	77	76	.....	508	fne. gy. s.
2999	Dec. 5	21 27 00	157 15 00	77	76	.....	549	fne. gy. s.
3000	Dec. 5	21 29 30	157 12 00	77	76	.....	1,557	gy. m. fne. s.
3001	Dec. 5	21 32 30	157 08 00	76	74	35.1	1,792	gy. m. fne. s.
3002	Dec. 5	21 35 00	157 04 00	75	75	.....	2,156	br. m. fne. s.
3003	Dec. 5	21 40 30	156 56 00	75	75	.....	1,951	br. m. lava.
3004	Dec. 5	21 41 20	156 54 00	75	75	35.1	2,325	fne. s. lava.
3005	Dec. 5	21 47 00	156 46 00	75	75	.....	2,612	br. m. s.
3006	Dec. 12	21 18 00	157 23 00	68	74	42.5	329	wh. and gy. s.
3007	Dec. 12	21 20 00	157 19 00	68	74	.....	323	fne. gy. s.
3008	Dec. 12	21 23 00	157 14 30	72	74	.....	547	gy. m. fne. s.
3009	Dec. 12	21 24 00	157 12 00	72	74	.....	603	gy. m. fne. s.
3010	Dec. 12	21 25 00	157 10 00	72	74	36.1	1,116	gy. m. fne. s.
3011	Dec. 12	21 26 17	157 08 30	72	74	.....	1,781	(No specimen.)
3012	Dec. 12	21 28 30	157 04 00	70	73	.....	2,067	br. m. fne. s.
3013	Dec. 12	21 32 30	156 54 00	70	73	35.3	1,807	br. m. s.
3014	Dec. 12	21 36 30	156 44 00	71	74	.....	2,767	br. m. fne. s.
3015	Dec. 12	21 41 00	156 32 30	68	73	.....	2,966	br. m. fne. s.
3016	Dec. 12	21 46 00	156 21 00	69	73	35.3	3,017	br. m. fne. s.
3017	Dec. 13	21 51 00	156 09 00	70	73	.....	3,027	(No specimen.)
3018	Dec. 13	21 56 00	155 57 30	69	74	.....	2,915	br. oz.
3019	Dec. 13	22 00 30	155 46 00	73	75	35.2	2,782	br. oz.
3020	Dec. 13	22 05 30	155 34 30	74	74	.....	2,654	br. oz.
3021	Dec. 13	22 10 00	155 23 30	74	75	.....	2,545	br. oz.
3022	Dec. 13	22 15 00	155 12 30	72	75	35.2	2,475	br. oz.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Cable Survey, California to Hawaiian Islands.						
	1891.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
3023	Dec. 13	22 20 00	155 01 00	72	75	.....	2,463	br. oz.
3024	Dec. 13	22 25 00	154 49 30	71	74	.....	2,477	br. oz.
3025	Dec. 14	22 30 00	154 38 30	71	75	35.3	2,485	br. oz.
3026	Dec. 14	22 35 00	154 27 00	69	74	.....	2,453	br. oz.
3027	Dec. 14	22 40 00	154 16 00	69	74	.....	2,500	br. oz.
3028	Dec. 14	22 45 00	154 04 30	73	74	35.7	2,587	br. oz.
3029	Dec. 14	22 50 00	153 53 00	74	74	.....	2,555	br. oz.
3030	Dec. 14	22 55 30	153 42 00	74	74	.....	2,602	br. oz.
3031	Dec. 14	23 01 00	153 31 00	73	74	35.2	2,649	br. oz.
3032	Dec. 14	23 06 00	153 20 30	72	74	.....	2,696	br. oz.
3033	Dec. 14	23 11 00	153 09 30	72	74	.....	2,822	br. oz.
3034	Dec. 14	23 16 00	152 59 00	72	74	35.2	2,827	br. oz.
3035	Dec. 15	23 21 30	152 48 00	70	73	.....	2,910	br. oz.
3036	Dec. 15	23 27 00	152 37 00	70	73	.....	2,894	br. oz. s.
3037	Dec. 15	23 32 30	152 26 00	70	74	35.2	2,927	br. oz. s.
3038	Dec. 15	23 38 00	152 15 00	71	74	.....	3,006	br. oz.
3039	Dec. 15	23 43 30	152 05 00	69	74	.....	2,976	br. oz.
3040	Dec. 15	23 49 00	151 55 00	70	74	41.1	2,985	br. oz.
3041	Dec. 15	23 56 00	151 42 00	69	74	38.9	3,030	br. oz.
3042	Dec. 16	24 03 00	151 29 30	69	73	.....	3,016	(No specimen.)
3043	Dec. 16	24 10 00	151 17 00	70	73	.....	3,038	br. oz.
3044	Dec. 16	24 17 00	151 04 00	70	73	.....	2,979	br. oz.
3045	Dec. 16	24 24 00	150 51 30	71	73	35.3	2,907	br. oz.
3046	Dec. 16	24 31 00	150 37 00	74	74	.....	2,747	br. oz.
3047	Dec. 16	24 37 00	150 23 00	72	73	.....	2,916	br. oz.
3048	Dec. 16	24 43 00	150 09 00	71	72	37.6	2,980	br. oz.
3049	Dec. 16	24 49 00	149 55 00	72	73	.....	2,912	br. oz.
3050	Dec. 17	24 55 00	149 41 00	70	73	.....	2,984	br. oz.
3051	Dec. 17	25 01 00	149 27 00	71	73	35.4	3,034	br. oz.
3052	Dec. 17	25 07 30	149 13 00	71	73	.....	2,957	br. oz.
3053	Dec. 17	25 13 30	148 59 00	72	73	.....	2,930	br. oz.
3054	Dec. 17	25 20 00	148 44 30	71	73	.....	2,938	(No specimen.)
3055	Dec. 17	25 26 30	148 30 00	69	73	35	2,881	br. oz.
3056	Dec. 17	25 33 00	148 16 00	69	73	.....	2,642	(No specimen.)
3057	Dec. 17	25 39 30	148 01 30	69	73	.....	2,903	br. oz.
3058	Dec. 18	25 46 00	147 47 00	69	72	35.1	2,893	br. oz.
3059	Dec. 18	25 53 00	147 32 30	69	72	.....	2,923	br. oz.
3060	Dec. 18	26 00 00	147 18 00	72	72	.....	2,787	(No specimen.)
3061	Dec. 18	26 06 36	147 03 16	72	72	35.2	2,884	br. oz.
3062	Dec. 18	26 15 00	146 49 00	74	73	.....	2,838	br. oz.
3063	Dec. 18	26 19 30	146 34 30	71	72	.....	2,777	br. oz.
3064	Dec. 18	26 26 00	146 20 00	69	72	35.1	2,829	br. oz.
3065	Dec. 19	26 32 30	146 05 30	68	71	.....	2,779	br. oz.
3066	Dec. 19	26 39 00	145 51 00	68	72	.....	2,854	br. oz.
3067	Dec. 19	26 45 00	145 36 30	68	72	35.1	2,346	br. oz.
3068	Dec. 19	26 44 00	145 38 30	69	72	.....	2,682	br. oz.
3069	Dec. 19	26 46 00	145 33 30	70	72	.....	2,677	br. oz.
3070	Dec. 19	26 50 30	145 24 00	69	72	.....	2,825	br. oz.
3071	Dec. 19	26 57 00	145 09 30	69	72	35.1	2,739	br. oz.
3072	Dec. 19	27 03 30	144 54 30	68	71	.....	2,714	br. oz.
3073	Dec. 20	27 10 00	144 39 30	66	71	.....	2,697	br. oz.
3074	Dec. 20	27 16 30	144 24 30	68	70	35.2	2,750	br. oz.
3075	Dec. 20	27 23 00	144 10 00	68	70	.....	2,506	br oz.
3076	Dec. 20	27 33 00	143 55 30	67	70	.....	2,716	br. oz.
3077	Dec. 20	27 42 30	143 41 30	67	70	35	2,375	br. oz.
3078	Dec. 21	27 52 00	143 27 00	67	70	.....	2,827	br. oz.
3079	Dec. 21	28 02 00	143 12 30	69	70	.....	2,736	br. oz.
3080	Dec. 21	28 08 00	142 57 00	69	71	.....	2,731	br. oz.
3081	Dec. 21	28 14 00	142 40 00	65	69	35.1	2,560	br. oz.
3082	Dec. 22	28 20 00	142 22 30	67	69	.....	2,684	br. oz.
3083	Dec. 22	28 26 00	142 05 00	67	69	.....	2,711	br. oz.
3084	Dec. 22	28 31 30	141 47 30	69	69	35.1	2,668	br. oz. lava.
3085	Dec. 22	28 37 30	141 33 00	69	69	.....	2,678	br. oz. lava.
3086	Dec. 22	28 43 00	141 19 00	68	69	.....	2,700	br. oz.
3087	Dec. 23	28 48 30	141 04 30	68	69	35.1	2,702	br. oz.
3088	Dec. 23	28 54 30	140 49 30	66	69	.....	2,735	(No specimen.)
3089	Dec. 23	29 00 30	140 35 00	66	68	.....	2,664	br. oz.
3090	Dec. 23	29 06 24	140 28 48	68	69	35.1	2,741	br. oz.
3091	Dec. 23	29 12 00	140 06 30	65	68	.....	2,729	br. oz.
3092	Dec. 23	29 17 30	139 52 00	65	68	.....	2,687	br. oz.
3093	Dec. 24	29 23 00	139 38 00	64	68	35.1	2,631	br. oz.
3094	Dec. 24	29 28 30	139 23 30	64	68	.....	2,608	br. oz.
3095	Dec. 24	29 34 00	139 09 00	63	68	.....	2,668	br. oz.
3096	Dec. 24	29 40 00	138 55 00	64	67	35.1	2,620	br. oz.
3097	Dec. 24	29 46 00	138 40 00	66	68	.....	2,572	br. oz.
3098	Dec. 24	29 52 30	138 24 00	63	67	.....	2,653	br. oz.
3099	Dec. 24	29 59 00	138 08 00	63	67	35.1	2,556	br. oz. lava.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Cable Survey, California to Hawaiian Islands.						
	1891.	° ′ ″	° ′ ″	*° F.*	*° F.*	*° F.*	*Fms.*	
3100	Dec. 24	30 05 30	137 52 00	62	67	.....	2,404	br. oz. lava.
3101	Dec. 25	30 12 00	137 36 30	63	66	.....	2,672	br. oz. lava.
3102	Dec. 25	30 18 30	137 21 00	61	65	35.1	2,626	br. oz.
3103	Dec. 25	30 23 30	137 09 00	61	66	.....	2,201	br. oz. lava.
3104	Dec. 25	30 24 00	137 07 00	62	66	35	1,924	No specimen.
3105	Dec. 25	30 25 00	137 05 00	62	66	.....	2,023	gy. oz. fne. s.
3106	Dec. 25	30 26 00	137 03 00	63	66	.....	2,248	No specimen.
3107	Dec. 25	30 27 00	137 00 30	63	66	35.2	2,604	br. oz. s. lava.
3108	Dec. 25	30 30 01	137 05 06	64	67	.....	2,521	br. oz.
3109	Dec. 25	30 29 30	137 10 30	64	67	33.2	2,422	br. oz.
3110	Dec. 25	30 25 00	137 15 00	64	67	.....	1,779	gy. oz. fne. s.
3111	Dec. 25	30 19 30	137 15 00	64	67	.....	2,298	br. oz. lava.
3112	Dec. 25	30 15 00	137 10 30	65	66	35.1	2,309	No specimen.
3113	Dec. 25	30 15 30	137 04 30	63	66	.....	2,551	br. oz.
3114	Dec. 25	30 19 30	137 00 30	62	60	.....	2,573	br. oz. lava.
3115	Dec. 25	30 28 00	136 53 00	62	66	35	2,291	br. oz. lava.
3116	Dec. 25	30 29 00	136 51 00	62	66	.....	1,932	br. oz.
3117	Dec. 26	30 30 00	136 49 00	62	66	.....	1,858	br. oz.
3118	Dec. 26	30 31 06	136 47 00	62	66	.....	2,131	br. oz.
3119	Dec. 26	30 33 00	136 42 30	62	66	.....	2,220	br. oz.
3120	Dec. 26	30 38 00	136 33 00	62	66	42.3	2,612	br. oz.
3121	Dec. 26	30 43 00	136 23 00	62	66	.....	2,502	br. oz.
3122	Dec. 26	30 49 30	136 08 30	63	66	.....	2,411	No specimen.
3123	Dec. 26	30 50 30	136 06 30	59	66	.....	2,473	br. oz.
3124	Dec. 26	30 54 45	135 56 35	62	65	.....	2,505	br. oz.
3125	Dec. 26	30 59 00	135 47 00	66	66	35.2	2,581	br. oz.
3126	Dec. 26	31 04 00	135 37 00	66	66	.....	2,565	br. oz.
3127	Dec. 26	31 08 00	135 26 30	63	66	.....	2,480	No specimen.
3128	Dec. 26	31 12 00	135 17 00	63	65	35	2,413	br. oz. lava.
3129	Dec. 26	31 16 00	135 07 00	64	65	.....	2,572	br. oz.
3130	Dec. 27	31 20 00	134 57 00	64	65	.....	2,574	br. oz.
3131	Dec. 27	31 24 00	134 47 00	64	65	35.2	2,602	br. oz.
3132	Dec. 27	31 28 00	134 36 30	64	65	.....	2,482	br. oz. lava.
3133	Dec. 27	31 32 30	134 26 30	63	65	.....	2,611	br. oz.
3134	Dec. 27	31 37 00	134 16 00	65	65	35	2,566	br. oz.
3135	Dec. 27	31 41 00	134 06 00	68	66	.....	2,598	br. oz.
3136	Dec. 27	31 45 14	133 56 00	69	66	.....	2,589	br. oz.
	1892.							
3137	Jan. 10	31 49 23	133 45 32	61	63	35.1	2,550	br. oz.
3138	Jan. 10	31 53 30	133 36 00	61	63	.....	2,516	br. oz.
3139	Jan. 10	31 57 30	133 26 00	61	63	.....	2,619	br. oz.
3140	Jan. 10	32 01 30	133 16 00	60	62	35.2	2,611	br. oz.
3141	Jan. 10	32 06 00	133 06 00	59	63	.....	2,619	br. oz.
3142	Jan. 10	32 10 00	132 56 00	60	63	.....	2,686	br. oz.
3143	Jan. 11	32 14 00	132 46 00	59	62	35.2	2,637	br. oz.
3144	Jan. 11	32 18 00	132 36 00	58	62	.....	2,527	br. oz.
3145	Jan. 11	32 22 00	132 26 00	59	62	.....	2,656	br. oz.
3146	Jan. 11	32 26 00	132 16 00	59	62	35.1	2,341	br. oz.
3147	Jan. 11	32 27 00	132 14 00	59	62	.....	2,223	br. oz.
3148	Jan. 11	32 28 00	132 12 00	59	63	.....	2,560	br. oz.
3149	Jan. 11	32 29 30	132 06 30	59	62	35.1	2,175	br. oz. lava.
3150	Jan. 11	32 30 00	132 04 30	59	62	.....	2,548	br. oz. bk. sp.
3151	Jan. 11	32 32 30	131 59 30	60	62	.....	2,458	br. oz.
3152	Jan. 11	32 36 00	131 49 30	59	62	35.3	2,583	br. oz.
3153	Jan. 11	32 39 00	131 40 00	59	62	.....	2,525	br. oz.
3154	Jan. 11	32 43 30	131 30 00	58	62	.....	2,379	br. oz.
3155	Jan. 11	32 47 00	131 20 00	58	61	35.3	2,519	br. oz.
3156	Jan. 11	32 51 00	131 10 00	58	61	.....	2,535	br. oz.
3157	Jan. 12	32 55 00	131 00 00	58	61	.....	2,572	br. oz. lava.
3158	Jan. 12	32 58 30	130 50 00	58	61	35.2	2,361	br. oz. lava.
3159	Jan. 12	32 59 30	130 48 00	58	61	.....	2,531	br. oz.
3160	Jan. 12	33 03 30	130 38 00	58	60	.....	2,483	br. oz.
3161	Jan. 12	33 07 00	130 28 00	58	60	35.1	2,541	br. oz.
3162	Jan. 12	33 10 30	130 18 00	59	62	.....	2,542	No specimen.
3163	Jan. 12	33 14 00	130 08 30	60	62	.....	2,551	br. oz.
3164	Jan. 12	33 18 00	129 58 00	59	61	35.1	2,584	br. oz. lava.
3165	Jan. 12	33 23 00	129 45 00	58	61	35.1	2,773	br. oz.
3166	Jan. 12	33 28 00	129 32 00	58	61	.....	2,701	br. oz.
3167	Jan. 12	33 33 00	129 18 30	58	61	.....	2,572	br. oz.
3168	Jan. 12	33 38 00	129 05 30	58	61	35.2	2,572	br. oz.
3169	Jan. 13	33 43 00	128 52 00	58	60	.....	2,612	br. oz.
3170	Jan. 13	33 48 00	128 39 30	57	61	.....	2,619	No specimen.
3171	Jan. 13	33 53 00	128 26 00	56	59	35.1	2,637	br. oz.
3172	Jan. 13	33 58 00	128 13 00	56	58	.....	2,568	br. oz.
3173	Jan. 13	34 03 00	128 00 00	58	58	.....	2,632	br. oz.
3174	Jan. 13	34 08 10	127 46 41	60	59	35.1	2,665	br. oz.
3175	Jan. 13	34 14 30	127 34 30	64	60	.....	2,588	br. oz.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Cable survey, California to Hawaiian Islands.						
	1892.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
3176	Jan. 13	34 20 30	127 22 30	58	59	.....	2,657	br. oz.
3177	Jan. 13	34 26 30	127 10 30	58	58	35.1	2,680	br. oz.
3178	Jan. 13	34 32 30	126 58 00	57	58	.....	2,649	br. oz.
3179	Jan. 13	34 38 30	126 46 00	59	58	.....	2,637	br. oz.
3180	Jan. 14	34 44 30	126 34 00	57	58	35.1	2,626	br. oz.
3181	Jan. 14	34 50 30	126 22 00	56	57	.....	2,606	br. oz.
3182	Jan. 14	34 56 00	126 09 30	57	57	.....	2,586	br. oz.
3183	Jan. 14	35 02 00	125 57 30	57	58	35.1	2,585	br. and gy. oz.
3184	Jan. 14	35 08 00	125 45 30	58	57	.....	2,572	br. oz.
3185	Jan. 14	35 14 07	125 33 18	59	57	.....	2,560	br. and gy. oz.
3186	Jan. 14	35 19 30	125 21 30	62	58	35	2,529	gy. and yl. oz.
3187	Jan. 14	35 25 30	125 09 30	50	57	34.9	2,496	br. and gy. oz.
3188	Jan. 14	35 31 00	124 57 30	57	56	.....	2,445	br. and gy. oz.
3189	Jan. 14	35 36 30	124 45 30	56	56	.....	2,413	br. and gy. oz.
3190	Jan. 14	35 42 00	124 33 30	53	59	34.9	2,312	br. and gy. oz.
3191	Jan. 15	35 47 30	124 21 30	54	54	.....	2,223	br. and gy. oz.
3192	Jan. 15	35 53 00	124 09 30	54	54	.....	2,149	br. and gy. oz.
3193	Jan. 15	35 58 30	123 57 30	54	54	34.9	2,169	gy. oz.
3194	Jan. 15	36 04 00	123 46 00	54	55	.....	2,107	gy. oz.
3195	Jan. 15	36 09 30	123 34 00	54	54	.....	1,974	gy. oz.
3196	Jan. 15	36 15 00	123 22 00	54	52	35	1,895	gy. oz.
3197	Jan. 15	36 21 00	123 10 00	59	52	.....	1,797	gy. oz.
3198	Jan. 15	36 25 00	123 00 00	59	52	.....	1,725	gy. oz.
3199	Jan. 15	36 29 30	122 50 30	53	52	35	1,666	gy. oz.
3200	Jan. 15	36 34 00	122 41 00	53	52	.....	1,513	gn. m.
3201	Jan. 15	36 38 00	122 31 00	51	52	.....	1,417	gn. m.
3202	Jan. 15	36 40 00	122 26 00	52	52	36.1	1,053	gn. m. fne. s.
		Off Alaska.						
3203	Apr. 7	58 22 00	150 09 00	34	38	.....	29	brk. sh.
3204	Apr. 7	58 25 00	150 18 00	34	38	.....	30	sh.
3205	Apr. 7	58 28 00	150 26 00	33	37	.....	38	sh.
3206	Apr. 7	58 31 00	150 34 00	33	37	.....	47	crs. s. sh.
3207	Apr. 7	58 34 00	150 42 00	33	38	.....	49	bk. s. brk. sh.
3208	Apr. 7	58 37 00	150 50 00	33	38	.....	85	gy. s. bk. sp.
3209	Apr. 7	58 39 00	150 58 00	33	38	.....	103	m. bk. s.
3210	Apr. 8	58 40 00	151 01 00	33	38	.....	107	m. s.
3211	Apr. 8	58 43 00	151 09 00	33	38	.....	118	bl. m. bk. sp.
3212	Apr. 8	58 46 00	151 17 00	33	38	.....	102	bl. m. bk. sp.
3213	Apr. 8	58 49 00	151 25 00	33	38	.....	93	bl. m. bk. sp.
3214	Apr. 11	59 32 00	151 55 00	37	36	.....	20	gy. s.
3215	Apr. 18	59 56 00	145 56 00	40	41	.....	55	s. m.
3215*a*	Apr. 18	59 34 45	144 58 00	43	42	.....	81	gn. m.
3216	Apr. 18	59 33 00	144 52 00	43	43	.....	97	p. m.
3217	Apr. 18	59 31 00	144 43 00	43	43	.....	377	g. m.
3218	Apr. 18	59 35 00	143 21 00	38	40	.....	156	p.
3219	Apr. 19	59 35 00	143 18 00	38	41	.....	140	m. p.
3220	Apr. 19	59 36 00	142 57 00	38	41	.....	225	bl. m.
3221	Apr. 19	59 37 00	142 45 00	39	41	.....	281	bl. m. g.
3222	Apr. 19	59 19 00	142 10 00	40	42	37.4	504	gn. m.
3223	Apr. 19	59 21 00	141 50 00	40	42	.....	114	p.
3224	Apr. 19	59 14 00	141 35 00	41	42	.....	116	s. g.
3225	Apr. 19	58 56 00	140 56 00	41	42	37.9	471	gn. m.
		Off Brit. Columbia.						
3226	Apr. 24	50 25 00	129 15 00	46	46	35.3	1,141	gn. m.
3227	Apr. 25	49 42 00	127 53 00	49	48	37.5	848	gn. m.
3228	Apr. 26	48 35 00	126 42 00	48	48	37	746	gn. m.
3229	Apr. 27	48 29 30	124 56 30	52	51	.....	51	p. rky.
3230	Apr. 27	48 29 00	124 55 00	52	51	.....	53	p. rky.
		Western Bering Sea.						
			Long. E.					
3231	May 29	53 13 00	172 38 00	41	40	.....	1,447	yl. m. fne. s.
3232	May 30	53 38 00	171 28 00	38	39	.....	1,818	No specimen.
3233	May 30	54 02 00	170 17 00	42	40	.....	1,853	fne. bk. s.
3234	May 30	54 19 00	169 03 00	40	40	35.6	1,996	yl. m. s.
3235	May 31	54 30 00	168 07 00	40	40	.....	47	fne. gy. s.
3236	May 31	55 09 00	165 51 00	40	40	.....	25	rky.
3237	May 31	55 10 00	165 47 00	39	40	.....	33	rky. m.
3238	May 31	55 08 00	165 48 00	39	39	.....	36	gy. s.
3239	May 31	55 10 30	165 45 00	39	39	.....	32	gy. s.
		Western coast of United States.						
	1893.		Long. W.					
3240	Apr. 26	36 48 15	121 59 05	58	54	.....	266	None obtained.
3241	Apr. 27	37 29 00	123 01 20	54	53	.....	301	stt. gy. m.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off Alaska.						
	1893.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
3242	June 5	57 40 00	143 18 00	48	47	35	2,064	gy. oz.
3243	June 6	57 44 00	150 45 00	46	45	.....	59	gy. s. sh.
3244	June 8	56 48 00	152 30 00	47	45	.....	87	stf. m.
3245	June 15	54 42 00	160 47 00	47	44	.....	60	bl. m.
3246	June 17	54 56 15	159 01 00	46	43	.....	48	gy. s. p.
3247	June 17	54 56 30	159 05 20	46	43	.....	41	gy. s. rky.
3248	June 17	54 56 45	159 09 00	46	43	.....	36	gy. s.
3249	June 17	54 57 45	159 11 00	46	43	.....	38	gy. s.
3250	June 17	54 58 45	159 13 45	46	43	.....	33	s. brk. sh.
3251	June 17	55 01 30	159 16 30	46	43	.....	27	gy. s.
3252	June 17	55 02 15	159 19 00	46	43	.....	17	fne. gy. s.
3253	June 27	54 04 00	162 55 00	48	46	.....	48	s. g.
3254	July 1	51 32 00	175 52 00	43	48	36.6	697	bk. s.
3255	July 1	51 35 40	176 41 00	47	48	.....	62	crs. gy. s. sh.
3256	July 1	51 35 40	176 46 15	48	48	.....	46	crs. gy. s.
3257	July 5	51 33 30	176 50 00	50	47	.....	57	sh.
3258	July 5	51 32 00	176 49 00	50	47	.....	78	gy. s. sh.
3259	July 5	51 28 00	176 49 00	50	47	39.4	172	gy. s. p.
3260	July 5	51 24 00	176 50 00	52	44	38.6	428	gy. s. sh.
3261	July 6	51 19 00	176 39 00	48	44	38.5	1,622	bk. s. brk. sh.
3262	July 6	51 11 00	176 25 00	52	44	36.9	2,350	gy. oz. fne. s.
3263	July 6	51 00 00	176 04 00	52	44	37.3	2,039	gy. m. s.
3264	July 6	50 41 00	175 30 00	49	48	39.6	3,323	gy. m. s.
3265	July 6	50 28 00	175 10 00	50	49	34.6	4,002	br. oz.
3266	July 7	50 16 00	174 51 00	50	48	.....	3,191	None obtained.
3267	July 7	50 03 00	174 30 00	50	49	35	2,802	gy. oz.
3268	July 7	50 31 00	173 54 00	53	49	.....	3,667	hard.
3269	July 7	50 57 00	173 06 00	49	48	.....	3,794	br. oz. s.
3270	July 8	51 23 00	172 18 00	50	49	.....	2,320	br. oz. s.
3271	July 8	51 50 00	171 38 00	49	48	.....	1,330	fne. bk. s.
3272	July 8	52 24 00	171 40 00	48	44	.....	250	rky.
3273	July 8	52 31 00	171 42 00	47	41	.....	320	fne. g.
3274	July 8	52 44 00	171 35 00	46	41	.....	97	dk. s. p.
3275	July 8	52 54 00	171 29 00	45	40	.....	369	fne. bk. s. g.
3276	July 9	55 04 00	170 11 00	49	46	.....	1,554	gn. m. s.
3277	July 9	55 36 00	170 02 00	48	47	.....	1,626	gn. m.
3278	July 9	56 06 00	169 58 00	48	47	.....	68	gy. s. sh.
3279	July 9	56 16 00	169 57 00	48	47	.....	72	gy. s. bk. sp.
3280	July 9	56 35 00	169 55 00	48	47	.....	52	s. rky.
3281	July 12	57 18 00	169 38 00	42	42	.....	35	gy. s. sh.
3282	July 12	57 18 00	172 20 00	43	44	38	62	gn. m.
3283	July 12	57 18 00	172 27 00	43	44	36.6	62	gn. m. s.
3284	July 12	57 18 00	172 43 00	42	44	38	62	co.
3285	July 12	57 18 00	172 51 00	43	44	37	64	gn. m.
3286	July 12	57 18 00	173 00 00	43	44	37	65	gn. m.
3287	July 13	57 18 00	173 09 00	42	44	37	66	gn. m.
3288	July 13	57 18 00	173 18 00	42	44	37	67	rky.
3289	July 13	57 19 00	173 27 00	42	43	37.8	69	rky.
3290	July 13	57 19 00	173 36 00	42	43	38	71	gn. m.
3291	July 13	57 19 00	173 45 00	42	42	37.8	82	rky.
3292	July 13	57 18 00	173 46 00	43	43	37.9	78	gn. m. fne. s.
3293	July 13	57 11 00	173 42 00	43	43	37.7	77	gy. s.
3294	July 13	57 06 00	173 42 00	43	43	38	81	gy. s.
3295	July 13	56 51 00	173 37 00	47	45	37	516	gn. m. s.
3296	July 13	56 42 00	173 18 00	46	46	37.7	80	fne. gy. s. rky.
3297	July 13	56 37 00	173 21 00	46	46	37.7	80	fne. gy. s. bk. sp.
3298	July 13	56 32 00	173 24 00	46	46	36.2	797	yl. m. g.
3299	July 13	56 29 00	173 19 00	47	46	35.5	1,188	None obtained.
3300	July 13	56 30 00	172 56 00	46	45	38	74	gy. s.
3301	July 14	56 30 00	172 25 00	46	44	38	100	fne. gy. s. bk. sp.
3302	July 17	56 07 00	169 33 00	49	46	38.3	260	fne. gy. s.
3303	July 17	55 24 00	168 34 00	48	45	.....	843	fne. gy. s.
3304	July 18	55 09 00	168 11 00	51	45	.....	809	fne. gy. s.
3305	July 18	54 56 00	167 44 00	50	46	.....	756	gn. m. vol. s.
3306	July 18	54 42 00	167 39 00	50	48	.....	442	gn. m.
3307	July 28	57 03 00	169 54 00	50	44	41.9	35	fne. gy. s.
3308	July 28	57 03 00	168 52 00	50	45	37.6	43	gy. s. sh.
3309	July 28	57 15 00	167 42 00	45	43	36	41	fne. gy. s.
3310	July 29	57 21 00	167 05 00	45	42	35	33	fne. bk. s.
3311	July 29	57 27 00	166 30 00	45	42	34.8	38	fne. s. bk. m.
3312	July 29	57 38 00	165 20 00	45	42	35.5	35	fne. s. dk. m.
3313	July 29	58 13 00	164 47 00	44	42	41.4	26	fne. gy. s.
3314	July 29	58 42 00	165 30 00	43	41	41.8	22	gy. s.
3315	July 30	58 51 00	166 11 00	42	41	41.0	21	fne. gy. s.
3316	July 30	58 36 00	166 38 00	42	41	40.1	25	fne. gy. s.
3317	July 30	58 22 00	167 04 00	44	42	37.0	29	crs. gy. s.
3318	July 30	58 07 00	167 29 00	45	42	35.5	36	gn. m. fne. s.
3319	July 30	57 52 00	167 54 00	46	43	37.5	38	dk. m. fne. s.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off Alaska.						
	1893.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
3320	July 30	57 38 00	168 19 00	46	43	36.1	36	fne. gy. s.
3321	July 31	57 24 00	168 42 00	46	44	36.8	41	gy. s. rky.
3322	July 31	57 10 00	169 05 00	46	44	37.3	42	fne. gy. s. bk. sp.
3323	Aug. 1	58 08 30	169 14 00	47	45	31.8	38	dk. m. fne. s.
3324	Aug. 1	58 45 30	168 48 00	44	43	33.9	30	fne. gy. s. m.
3325	Aug. 2	59 04 00	168 34 00	43	42	39.8	24	fne. gy. s. bk. sp.
3326	Aug. 2	59 41 00	168 06 00	42	41	41.1	22	fne. gy. s. sh.
3327	Aug. 2	59 55 00	167 55 00	42	42	.....	14	gy. s.
3328	Aug. 2	59 56 00	167 54 00	42	42	.....	16	gy. s. sh.
3329	Aug. 2	59 58 00	167 53 00	42	42	.....	14	fne. gy. s.
3330	Aug. 2	60 00 00	167 53 00	42	42	.....	14	fne. gy. s.
3331	Aug. 2	60 01 30	167 54 00	42	42	.....	14	fne. gy. s.
3332	Aug. 2	60 03 00	167 55 00	42	42	.....	14	fne. gy. s.
3333	Aug. 2	60 05 00	167 56 00	42	42	.....	15	fne. gy. s.
3334	Aug. 2	60 06 30	167 57 00	42	42	.....	16	fne. gy. s.
3335	Aug. 2	60 08 00	167 58 00	42	42	.....	15	fne. gy. s.
3336	Aug. 2	60 09 30	167 59 00	42	42	.....	15	fne. gy. s. bk. sh.
3337	Aug. 2	60 11 00	168 00 00	42	42	.....	16	fne. gy. s.
3338	Aug. 2	60 13 00	168 01 00	42	42	.....	16	fne. gy. s. bk. sh.
3339	Aug. 2	60 14 30	168 02 00	42	42	.....	16	fne. gy. s.
3340	Aug. 2	60 16 00	168 03 00	42	43	.....	16	fne. gy. s.
3341	Aug. 2	60 17 30	168 04 00	43	43	.....	16	fne. gy. s.
3342	Aug. 2	60 19 00	168 05 00	43	43	.....	16	fne. gy. s.
3343	Aug. 2	60 21 00	168 05 00	43	43	.....	17	fne. gy. s. bk. sh.
3344	Aug. 2	60 22 00	168 06 00	43	43	.....	16	fne. gy. s.
3345	Aug. 2	60 24 00	168 07 00	43	43	.....	19	fne. gy. s. bk. sh.
3346	Aug. 2	60 26 00	168 08 00	43	43	.....	19	fne. gy. s.
3347	Aug. 2	60 26 00	169 54 00	41	41	35.3	27	gn. m. fne. s.
3348	Aug. 3	60 24 00	170 48 00	42	42	32.0	35	bk. m.
3349	Aug. 3	59 47 00	171 08 00	43	43	31.8	38	dk. m.
3350	Aug. 3	58 52 00	170 38 00	45	44	30.8	40	bk. m.
3351	Aug. 4	58 33 00	170 28 00	46	43	.....	42	None obtained.
3352	Aug. 4	58 15 00	170 18 00	46	44	35.4	40	gn. m. fne. s.
3353	Aug. 5	57 24 00	170 24 00	47	43	40.3	37	fne. gy. s. sh.
3354	Aug. 5	58 04 00	171 41 00	48	45	37.4	55	gn. m.
3355	Aug. 5	58 52 00	172 45 00	46	44	35.3	57	gn. m.
3356	Aug. 6	59 09 00	173 09 00	45	43	34.2	57	gn. m.
3357	Aug. 6	59 24 00	173 31 00	45	43	35.7	57	gn. m.
3358	Aug. 6	59 33 00	175 00 00	51	46	36.7	70	gn. m.
3359	Aug. 7	58 43 00	176 10 00	44	44	.....	71	gn. m.
3360	Aug. 7	58 11 00	176 38 00	45	44	35.5	1,744	gn. m. fne. s.
3361	Aug. 7	58 01 00	175 41 00	48	46	35.2	1,367	gn. m. fne. s.
3362	Aug. 7	57 41 00	174 05 00	49	47	38.0	77	gn. m.
3363	Aug. 7	57 25 00	172 50 00	47	45	37.8	69	dk. gn. m. fne. s.
3364	Aug. 8	57 08 00	171 38 00	47	45	37.8	60	gn. m.
3365	Aug. 9	56 49 00	169 42 00	46	44	40.9	37	fne. s. sh.
3366	Aug. 9	56 37 00	167 55 00	49	46	38.0	59	gn. m. s.
3367	Aug. 9	56 31 00	166 43 00	48	46	37.5	55	dk. gn. m. fne. s.
3368	Aug. 10	56 23 00	165 28 00	48	45	36.5	48	gn. m. fne. s.
3369	Aug. 10	56 18 00	164 48 00	48	45	36.4	49	fne. gy. s.
3370	Aug. 10	54 53 15	164 25 40	53	47	.....	20	dk. gy. s. lava.
3371	Aug. 10	54 52 00	164 26 20	53	47	.....	17	dk. gy. s. lava.
3372	Aug. 10	54 51 30	164 26 40	53	47	.....	15	dk. gy. s.
3373	Aug. 10	54 51 00	164 27 00	53	47	.....	14	dk. gy. s.
3374	Aug. 10	54 50 30	164 27 20	53	47	.....	9	dk. gy. s.
3375	Aug. 17	53 25 00	167 33 00	47	46	41.8	43	bk s.
3376	Aug. 17	53 35 00	167 53 00	47	44	40.3	89	g.
3377	Aug. 17	53 58 00	167 59 00	48	44	37.9	407	fne. gy. s. bk. sp.
3378	Aug. 17	53 45 00	168 01 30	48	44	36.2	755	gn. m. fne. s.
3379	Aug. 17	53 52 00	168 01 30	48	47	36.5	717	dk. s. fne. g.
3380	Aug. 17	53 56 00	168 07 00	48	47	36.6	781	bk. vol. s.
3381	Aug. 17	54 04 00	168 14 00	49	48	35.8	1,263	gy. s.
3382	Aug. 17	54 30 00	168 35 00	49	47	36.4	822	hard.
3383	Aug. 17	54 56 00	168 56 00	48	46	35.9	1,205	gy. s.
3384	Aug. 18	55 22 00	169 17 00	48	47	35.9	1,187	gn. m. s.
3385	Aug. 18	55 50 00	169 24 00	48	47	36.0	1,036	gn. m. s.
3386	Aug. 18	55 59 00	169 27 00	49	47	38.3	341	gn. m. crs. bk. s.
3387	Aug. 18	56 09 00	169 29 00	49	48	38.7	292	dk. m.
3388	Aug. 18	56 19 00	169 32 00	49	48	.....	74	gy. s. g.
3389	Aug. 18	56 47 00	170 34 00	46	43	.....	57	dk. m.
3390	Aug. 19	56 45 00	171 10 00	46	45	.....	63	fne. gy. s. bk. sp.
3391	Aug. 19	56 42 00	171 45 00	46	45	.....	65	fne. gy. s. bk. sp.
3392	Aug. 19	56 39 00	172 21 00	47	45	38.9	76	gy. s. m.
3393	Aug. 19	56 36 00	172 56 00	46	46	38.1	346	gn. m.
3394	Aug. 19	56 32 00	173 32 00	47	46	35.4	1,631	bl. m. fne. s. g.
3395	Aug. 19	56 29 00	174 26 00	48	47	35.4	1,787	crs. bk. s.
3396	Aug. 19	56 25 00	175 35 00	47	47	35.4	2,000	gn. m. fne. s. bk. sp.
3397	Aug. 20	56 21 00	176 45 00	48	47	35.0	2,049	gn. m.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off Alaska.						
	1893.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
3398	Aug. 20	55 25 00	176 13 00	48	47	35.1	2,055	gn. m. fne. s.
3399	Aug. 20	54 38 00	175 27 00	56	49	35.1	2,041	gn. m. s.
3400	Aug. 20	55 00 00	174 32 00	48	47	35.3	1,996	gn. m. fne. s.
3401	Aug. 21	55 23 00	173 38 00	48	47	35.5	1,928	gn. m. fne. s.
3402	Aug. 21	55 46 00	172 44 00	51	48	35.1	1,833	gn. m. fne. s.
3403	Aug. 21	56 26 00	171 04 00	50	46	.....	171	gn. m. fne. s.
3404	Aug. 22	56 18 00	170 34 00	49	46	39.0	69	gn. m. fne. s.
3405	Aug. 22	56 01 00	170 50 00	48	47	36.0	924	gn. m. crs. s.
3406	Aug. 22	55 43 00	171 07 00	49	48	35.4	1,647	gn. m. fne. s.
3407	Aug. 22	54 59 00	171 49 00	49	48	35.1	1,867	gn. m.
3408	Aug. 22	54 17 00	172 30 00	48	47	35.0	1,932	gn. m. fne. s.
3409	Aug. 23	53 48 00	173 11 00	50	48	35.1	1,948	br. m. dk. s.
3410	Aug. 23	53 29 00	171 51 00	50	48	35.2	1,429	gn. m. bk. s.
3411	Aug. 23	53 09 00	170 31 00	50	48	35.8	1,027	bk. s.
3412	Aug. 24	53 38 00	170 39 00	48	47	.....	1,171	bk. s. c.
3413	Aug. 24	54 08 00	170 47 00	49	48	.....	1,053	gn. m. fne. s.
3414	Aug. 31	54 13 00	165 58 00	51	46	44.6	42	dk. gy. s.
3415	Aug. 31	54 10 00	165 54 00	51	46	45.0	42	dk. gy. s.
3416	Aug. 31	54 07 00	165 51 00	54	47	45.0	38	bk. m. fne. s.
3417	Aug. 31	54 18 00	165 41 00	51	46	45.9	45	g. brk. sh.
3418	Aug. 31	54 26 00	165 28 00	50	46	41.5	84	g. crs. bk. s.
3419	Aug. 31	54 14 00	165 33 00	55	47	.....	23	fne. gy. s.
3420	Aug. 31	54 13 45	165 33 30	55	47	.....	23	fne. gy. s.
3421	Aug. 31	54 13 30	165 34 00	55	47	.....	28	fne. gy. s.
3422	Aug. 31	54 13 15	165 34 30	55	47	.....	25	fne. gy. s. bk. sp.
3423	Aug. 31	54 13 00	165 35 00	55	47	.....	26	fne. gy. s. sh.
3424	Sept. 1	54 36 00	165 27 00	50	46	39.0	113	bk. s. g.
3425	Sept. 1	55 12 00	166 36 00	53	49	39.9	81	g. m.
3426	Sept. 1	55 47 00	167 53 00	49	47	38.8	78	fne. bk. s.
3427	Sept. 1	55 59 00	168 19 00	49	46	39.0	79	fne. gy. s.
3428	Sept. 2	56 11 00	168 45 00	48	46	39.0	97	fne. dk. s.
3429	Sept. 2	56 22 00	169 09 00	49	47	40.0	77	crs. s. g.
3429*a*	Sept. 2	56 28 00	170 04 00	49	47	39.3	61	gn. m. fne. s.
3430	Sept. 2	56 55 00	170 18 00	49	46	40.6	47	gn. m. fne. s.
3431	Sept. 3	56 48 00	169 26 00	47	45	39.0	43	gn. m.
3432	Sept. 8	54 01 30	166 23 00	51	47	44.7	42	bk. s. g.
3433	Sept. 8	54 05 00	166 18 00	52	47	43.2	49	rky.
3434	Sept. 8	54 09 00	166 15 00	52	45	42.5	54	g. brk. sh.
3435	Sept. 8	54 12 00	166 09 00	51	45	42.1	57	dk. g.
3436	Sept. 8	54 16 40	165 50 00	51	45	44.0	49	dk. gy. s.
3437	Sept. 8	54 18 00	165 40 00	57	46	43.0	50	gy. s. brk. sh.
3438	Sept. 8	54 15 30	165 32 00	57	46	42.9	51	crs. dk. s. brk. sh.
3439	Sept. 9	54 27 00	163 55 00	52	48	46.5	52	fne. gy. s. bk. sp.
3440	Sept. 9	54 32 00	163 31 00	55	48	44.0	54	bk. s. g.
3441	Sept. 9	54 33 00	163 19 00	55	48	42.8	61	bk. g.
3442	Sept. 9	54 39 00	163 05 00	53	47	45.6	35	fne. g. brk. sh.
3443	Sept. 9	54 40 00	163 03 00	53	47	.....	37	g. brk. sh.
3444	Sept. 9	54 44 00	162 56 00	53	47	.....	41	rky.
3445	Sept. 9	54 46 00	162 52 00	51	48	.....	30	crs. dk. s.
3446	Sept. 9	54 48 00	162 50 00	51	48	.....	33	bk. s.
3447	Sept. 9	54 51 00	162 43 00	51	49	.....	23	rky.
3448	Sept. 9	54 52 00	162 41 00	51	49	.....	15	brk. sh.
3449	Sept. 9	54 53 00	162 39 00	51	49	.....	18	g. brk. sh.
3450	Sept. 9	54 53 30	162 38 00	51	49	.....	15	g. brk. sh.
3451	Sept. 9	54 54 00	162 37 00	51	49	.....	10	bk. s. brk. sh.
3452	Sept. 11	55 12 30	161 53 00	52	48	.....	22	bk. s. r.
3453	Sept. 11	55 18 00	161 18 00	53	49	.....	32	dk. s.
3454	Sept. 11	55 19 00	161 03 00	52	49	.....	28	crs. s. g. brk. sh.
3455	Sept. 11	55 23 30	160 54 00	52	49	.....	31	gy. s. bk. sp.
3456	Sept. 11	55 24 30	160 49 30	52	49	.....	32	bk. s.
3457	Sept. 11	55 25 00	160 45 00	53	49	.....	42	fne. bk. s.
3458	Sept. 11	55 26 00	160 41 00	53	49	.....	36	brk. sh.
3459	Sept. 11	55 28 00	160 37 00	53	49	.....	21	brk. sh.
3460	Sept. 11	55 29 00	160 35 00	52	48	.....	19	g. brk. sh.
3461	Sept. 11	55 30 00	160 34 30	52	48	.....	13	bk. s. sh.
3462	Sept. 11	55 31 00	160 35 00	52	48	.....	27	fne. bk. s. sh.
3463	Sept. 11	55 32 00	160 35 00	52	48	.....	31	fne. bk. s.
3464	Sept. 11	55 33 00	160 35 00	52	48	.....	38	bk. s.
3465	Sept. 11	55 34 00	160 35 00	52	48	.....	38	gy. s. sh.
3466	Sept. 11	55 35 00	160 35 00	52	49	.....	42	bk. s.
3467	Sept. 11	55 35 30	160 35 00	52	49	.....	31	bk. s. sh.
3468	Sept. 11	55 36 00	160 35 00	52	49	.....	26	bk. s.
3469	Sept. 14	57 14 00	151 52 00	48	47	.....	46	gy. s. brk. sh.
3470	Sept. 14	57 24 00	149 33 00	48	47	36.1	938	rky.
3471	Sept. 14	57 21 00	149 11 00	49	47	35.1	1,427	bl. m. s.
3472	Sept. 14	57 18 00	148 38 00	50	48	35.1	1,961	br. m. fne. s.
3473	Sept. 15	57 14 00	148 06 00	50	47	35	2,741	br. m.
3474	Sept. 15	57 08 00	147 22 00	53	51	35	2,587	br. m.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Off Alaska.						
	1893.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
3475	Sept. 15	57 11 00	146 41 00	57	51	35	2,320	gy. oz.
3476	Sept. 15	57 15 00	145 52 00	56	51	34.6	2,150	gy. oz.
3477	Sept. 15	57 18 00	145 05 00	59	52	35.1	2,149	gy. oz.
3478	Sept. 15	57 20 00	144 17 00	53	51	35.1	2,119	gy. oz.
3479	Sept. 16	57 20 00	143 27 00	53	51	35.1	2,099	gy. oz.
3480	Sept. 16	57 17 00	142 28 00	53	51	35.1	2,034	gy. oz.
3481	Sept. 16	57 12 00	141 31 00	55	52	35.1	1,946	lt. br. oz.
3482	Sept. 16	57 09 30	140 37 00	58	54	35.1	1,826	lt. br. oz.
3483	Sept. 16	57 09 00	139 38 00	59	55	35.	1,868	br. oz.
3484	Sept. 16	57 07 00	138 40 00	54	53	35.1	1,724	br. and gy. oz.
3485	Sept. 17	57 04 00	137 43 00	53	51	35.1	1,553	gy. oz.
3486	Sept. 17	57 01 00	136 46 00	53	52	35.1	1,270	br. m.
3487	Sept. 17	57 00 00	136 12 30	55	53	38.9	756	gn. m. s.
3488	Sept. 17	56 58 40	135 47 30	55	54	45	55	rky.
		Western Aleutian islands.						
	1894.							
3489			Long. E.					
3490	June 6	52 46 30	175 27 00	44	40	-------	2,237	No specimen.
3491	June 7	52 41 30	176 24 00	40	39	35	2,107	br. m. fne. s.
		Eastern Bering Sea.						
			Long. W.					
3492	June 29	57 59 00	166 04 00	44	38	33	32	gy. s.
3493	June 29	58 06 00	165 22 00	45	38	35.7	26	fne. gy. s.
3494	June 29	58 24 00	163 38 00	40	37	34.5	21	fne. gy. s.
3495	June 30	57 28 00	163 14 00	38	38	34	27	fne. gy. s.
3496	June 30	56 59 00	163 02 00	42	40	32	34	fne. gy. s.
3497	June 30	56 59 00	163 48 00	42	40	34.3	37	fne. gy. s.
3498	June 30	56 58 00	165 15 00	41	38	34	44	gn. m.
3499	July 1	56 57 00	166 33 00	39	39	34	40	gn. m.
3500	July 1	56 54 00	167 51 00	39	39	-------	44	gy. s.
3501	July 1	57 52 00	167 19 00	42	43	37	37	gn. m.
3502	July 13	56 35 00	168 18 00	43	41	-------	59	s. m.
		South of Unimak Id. and north of Sannak islands.						
3503	July 15	54 24 00	163 51 00	43	41	-------	43	crs. bk. s.
3504	July 15	54 26 00	163 44 00	43	41	37.3	54	fne. bk. s.
3505	July 15	54 29 00	163 37 00	43	41	37	57	crs. bk. s. p.
3506	July 15	54 30 30	163 29 00	43	40	37	59	bk. s. p.
3507	July 15	54 32 30	163 21 00	43	40	39	60	bk. s.
3508	July 15	54 34 30	163 14 00	43	39	38	41	bk. g.
3509	July 15	54 36 00	163 06 00	43	39	41	46	gy. s.
3510	July 15	54 37 00	163 02 00	43	39	40	25	gy. s.
3511	July 15	54 37 30	163 01 00	43	39	39	30	gy. s.
3512	July 15	54 38 00	162 59 00	43	39	40	38	rky.
3513	July 15	54 40 30	163 00 00	43	39	38	30	bk. s. g.
3514	July 15	54 46 30	163 08 00	43	39	38	46	gn. m.
3515	July 22	54 40 00	163 01 00	48	41	40.1	23	rky.
3516	July 22	54 38 00	162 58 30	47	40	-------	50	bk. s. p.
3517	July 22	54 35 00	162 55 40	48	41	-------	38	rky.
3518	July 22	54 32 30	162 53 00	49	42	41	33	sh.
3519	July 22	54 28 15	162 49 00	49	42	41.2	33	rky.
		Northern portion of Bering Sea.						
3520	Aug. 3	58 18 00	175 57 00	49	43	35	1,363	gy. oz. fne. s.
3521	Aug. 3	58 27 00	176 51 00	50	43	35.6	1,279	gy. oz. fne. s.
3522	Aug. 3	58 37 00	177 45 00	49	43	36.4	717	gn. m. s.
3523	Aug. 3	58 40 00	178 03 00	50	43	38	349	r. fne. gy. s.
3524	Aug. 3	58 42 00	178 12 00	49	43	38	369	fne. gy. s.
3525	Aug. 4	58 45 00	178 30 00	48	43	35	1,231	fne. gy. s.
3526	Aug. 4	58 48 00	178 49 00	46	42	35	1,830	gn. m. fne. s.
3527	Aug. 4	58 52 00	179 07 00	46	42	35.1	1,812	gy. oz.
3528	Aug. 4	58 56 00	179 25 00	46	42	35	1,838	gy. oz.
3529	Aug. 4	59 25 00	179 13 00	55	44	35	1,765	gy. oz. fne. s.
3530	Aug. 4	59 55 00	179 01 00	47	44	36.3	713	gy. oz. fne. s.
3531	Aug. 4	60 25 00	178 49 00	48	44	38	183	gn. m. fne. s.
3532	Aug. 7	58 00 00	172 58 00	51	45	36	61	fne. dk. s.
		South of Alaska Peninsula.						
	1895.							
3533	June 13	55 31 00	159 23 00	46	42	-------	100	fne. bk. g.
		Bering Sea, south of St. Paul Island.						
3534	June 24	56 59 30	170 24 30	36	37	-------	20	fne. bk. s.
3535	June 24	57 01 00	170 26 20	36	37	-------	38	fne. bk. s. brk. sh.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Bering Sea, south of St. Paul Isd.						
	1895.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
3536	June 24	57 04 00	170 30 45	36	37	-------	33	rky.
3537	June 24	57 04 45	170 29 15	36	37	-------	36	fne. bk. g.
3538	June 24	57 05 30	170 27 45	40	35	-------	25	fne. gy. s. p.
3539	June 24	57 06 00	170 26 30	40	35	-------	29	fne. gy. s. sh.
3540	June 24	57 06 40	170 25 00	40	35	-------	32	bk. p.
3541	June 24	57 07 30	170 23 20	42	34	-------	19	fne. gy. s.
		Bering Sea betw. Pribilof and Commander islands.						
3542	June 26	56 53 00	172 15 00	37	39	38.9	66	fne. s. m.
3543	June 27	56 00 00	177 30 00	40	40	35.1	2,056	No specimen.
3544	June 28	56 02 00	178 50 00	40	40	35.1	2,083	No specimen.
3545	June 29	55 45 00	179 57 00 Long. E.	40	39	35.1	2,086	br. m. oz.
3546	June 30	55 59 00	178 43 00	43	41	35.1	2,105	br. m. oz.
3547	June 30	55 55 00	177 12 00	40	41	35.6	2,113	br. m. oz.
3548	July 1	55 52 00	177 25 00	38	40	35.1	2,120	br. m. oz.
3549	July 1	55 53 00	173 53 00	45	43	35.2	2,111	br. m. oz.
3550	July 2	55 59 00	171 57 00	42	44	35.1	2,086	br. m. oz.
3551	July 2	56 00 00	169 46 00	45	44	35.1	2,154	br. m. oz.
3552	July 2	56 00 00	168 16 00	43	43	35.1	2,153	br. m.
3553	July 2	55 58 00	166 43 00	42	43	35.1	2,119	gy. s. m.
3554	July 3	55 43 00	166 15 00	42	43	35.1	2,090	gy. s. m.
3555	July 3	55 25 00	165 46 00	41	43	34.3	70	gy. s. m.
3556	July 3	55 16 00	165 32 30	42	43	-------	20	crs. s. rky.
3557	July 3	55 12 00	165 38 00	42	43	-------	35	gy. s.
3558	July 3	55 11 00	165 40 00	42	43	-------	37	gy. s.
3559	July 3	55 11 20	165 46 20	42	43	-------	15	rky.
3560	July 5	55 25 30	165 48 00	45	44	35.1	144	fne. gy. s.
3561	July 5	55 27 00	165 49 00	45	44	34.6	66	rky.
3562	July 5	55 28 30	165 51 30	45	44	38.1	341	gy. s. m.
3563	July 5	55 32 00	165 56 30	45	45	35.1	1,087	g.
3564	July 6	56 25 00	167 52 00	43	45	35	2,137	gn. oz.
3565	July 6	56 56 00	169 06 00	43	44	35	1,866	bl. m. oz.
3566	July 6	57 16 00	169 41 00	45	44	36	972	bl. m. oz.
3567	July 6	57 29 00	170 09 00	46	44	-------	410	gy. s. m.
3568	July 6	57 35 00	170 24 00	45	43	38.1	537	br. oz. g.
3569	July 6	57 41 00	170 39 00	45	42	38	609	br. oz. s.
3570	July 6	57 47 00	170 54 00	44	42	37	540	gn. oz. g.
3571	July 6	57 53 00	171 09 00	43	42	36.5	696	gn. m. oz.
3572	July 7	58 13 00	171 51 00	42	42	35	1,469	gn. m. oz.
3573	July 7	58 36 00	172 47 00	42	41	35	1,898	hrd.
3574	July 7	58 23 00	174 17 00	45	42	38.7	1,978	bl. m. oz.
3575	July 7	58 12 00	175 49 00	48	43	35	2,041	br. m. oz.
3576	July 7	58 01 00	177 21 00	44	42	19	2,068	br. m. oz.
3577	July 7	57 49 00	178 50 00 Long. W.	42	42	35	2,080	br. m. oz.
3578	July 7	57 38 00	179 42 00	44	42	-------	2,084	br. m. oz.
3579	July 7	57 34 00	179 16 00	43	41	35	2,076	gn. m.
3580	July 7	57 30 00	178 50 00	43	41	35	2,059	gn. m.
3581	July 7	57 23 00	178 17 00	41	41	35.2	2,059	gn. m.
3582	July 8	57 13 00	177 07 00	41	41	35.1	1,994	gn. m.
3583	July 8	57 03 00	176 00 00	41	41	35	1,803	gn. m. fne. s.
3584	July 8	56 54 00	174 50 00	42	42	35	1,825	No specimen.
3585	July 8	-------	-------	-------	-------	-------	-------	
		Bering Sea betw. Pribilof and Aleutian islands.						
3586	Aug. 4	53 59 00	166 29 00	46	46	39.2	76	gn. m. s.
3587	Aug. 4	54 01 30	166 30 30	46	43	38.8	98	fne. gy. s. bk. sp.
3588	Aug. 4	54 03 30	166 31 30	46	45	-------	93	gy. s. g.
3589	Aug. 4	54 00 30	169 20 30	45	45	35.5	1,003	gn. m. bk. s.
3590	Aug. 5	54 30 00	169 31 00	44	45	35.5	1,491	gn. m.
3591	Aug. 5	54 59 00	169 41 00	46	45	35	1,676	gn. m. fne. s.
3592	Aug. 5	55 12 00	168 47 00	46	44	35.2	1,035	br. oz.
3593	Aug. 6	55 34 00	169 22 00	46	45	34.7	1,315	br. oz.
3594	Aug. 7	55 10 00	170 56 00	45	44	34.7	1,664	br. oz.
3595	Aug. 8	55 12 00	171 48 00	44	45	35.2	1,819	br. oz.
3596	Aug. 8	55 32 00	172 17 00	43	43	35.5	1,901	br. oz.
3597	Aug. 10	56 15 00	172 35 00	46	45	36	1,267	gn. m. s.
3598	Aug. 10	56 28 00	172 39 00	45	44	38.1	296	gn. m. s.
3599	Aug. 10	56 29 00	172 39 00	45	45	38.1	200	gn. m. s.
3600	Aug. 10	56 30 00	172 40 00	45	45	37.1	156	gn. m. s.
3601	Aug. 10	56 31 00	172 40 00	45	44	37.1	110	gn. m. s.
3602	Aug. 11	55 53 00	171 42 00	45	44	35.1	1,496	gn. m. s.
3603	Aug. 12	54 39 00	170 19 00	46	44	35.3	1,025	gn. oz.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. W.	Air.	Surface.	Bottom.		
		Bering Sea betw. Pribilof and Aleutian isds.						
	1895.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
3604	Aug. 12	54 46 00	169 29 00	45	45	35.2	1,355	gn. oz.
3605	Aug. 12	55 01 00	168 33 00	44	45	35.1	1,162	gn. m. s.
3606	Aug. 13	54 54 00	168 13 00	44	44	35.5	1,132	gn. m. s.
3607	Aug. 13	54 41 00	168 01 00	44	45	37.1	823	gn. m. s.
3608	Aug. 13	54 41 00	168 25 00	44	45	35.3	1,122	gn. m. s.
3609	Aug. 13	55 09 00	167 40 00	45	45	37.5	189	gn. m. s.
3610	Aug. 13	55 32 00	167 50 00	46	44	38.1	110	fne. gy. s.
3611	Aug. 13	55 32 00	168 11 00	45	45	38.9	83	fne. gy. s. bk. sp.
3612	Aug. 13	55 42 00	168 32 00	45	45	38.3	76	bn. m. fne. s.
3613	Aug. 18	54 14 00	166 54 30	52	46	36.3	778	gn. m. bk. s.
3614	Aug. 18	54 25 00	167 13 00	50	46	38.1	334	gn. m. s.
3615	Aug. 18	54 25 00	167 38 00	45	46	37.1	486	gn. m. s.
3616	Aug. 19	54 11 30	167 50 00	44	42	35.2	1,048	gn. m. s.
3617	Aug. 19	54 24 00	168 02 00	44	42	37.1	538	gn. m. s.
3618	Aug. 19	54 10 00	168 14 00	44	42	35.5	1,075	gn. m. bk. s.
3619	Aug. 19	54 06 00	168 37 00	45	43	35.3	1,231	gn. m. s.
3620	Aug. 19	54 17 00	168 53 30	45	43	35.6	1,014	gn. m. bk. s.
3621	Aug. 19	54 39 00	168 52 30	47	44	35.5	975	gn. m. s.
3622	Aug. 19	54 53 00	169 19 00	46	45	35.1	1,471	gn. m. s.
3623	Aug. 20	55 11 00	168 30 30	47	45	35.9	944	gn. m.
3624	Aug. 20	55 32 00	168 36 00	48	47	38.1	273	gn. m. s.
3625	Aug. 20	55 19 30	168 09 00	46	45	38.1	229	gn. m. fne. s.
3626	Aug. 20	55 19 30	168 10 00	46	45	38.1	244	gy. s.
3627	Aug. 20	55 17 00	168 01 00	46	45	38	219	fne. gy. s.
3628	Aug. 20	55 23 00	167 48 00	47	47	37.8	90	fne. gy. s. bk. sp.
3629	Aug. 20	55 11 00	167 56 00	46	45	37.8	367	gn. m. s.
3630	Aug. 21	55 04 00	167 24 00	47	45	37.6	99	bk. s.
3631	Aug. 21	55 19 00	167 27 00	47	47	36.5	78	fne. bk. s.
3632	Aug. 21	55 30 00	167 51 00	46	46	37.6	74	gn. m. s.
3633	Aug. 21	55 41 00	168 34 00	46	46	37.8	77	gn. m. s.
3634	Aug. 21	55 43 00	168 42 00	46	45	38.4	89	gy. s. m.
3635	Aug. 21	55 44 00	168 47 00	46	45	37.8	141	gy. s.
3636	Aug. 21	55 43 00	168 44 00	47	45	38	108	fne. gy. s.
3637	Aug. 21	55 27 00	168 01 30	47	46	36.8	104	fne. gy. s.
3638	Aug. 22	55 42 00	166 09 00	47	46	37.5	68	gn. m.
3639	Aug. 22	56 31 00	166 59 00	48	47	35.3	57	gn. m. s.
3640	Aug. 24	56 02 00	169 06 30	47	45	37.9	77	gn. m. s.
3641	Aug. 24	54 57 30	167 14 00	48	47	37.7	137	gn. m. s.
3642	Aug. 24	54 56 00	167 02 30	47	46	37.3	116	gn. m. s.
3643	Aug. 24	54 55 30	166 57 30	46	46	37.3	113	gn. m. s.
3644	Aug. 24	54 57 00	166 53 00	46	46	37.8	93	gn. m. s.
3645	Aug. 24	54 52 00	166 43 30	46	46	37.5	113	gn. m.
3646	Aug. 24	54 54 00	166 35 30	47	46	37.5	90	gn. m. s.
3647	Aug. 24	54 49 30	166 26 30	46	46	37.3	106	gn. m. s.
3648	Aug. 24	54 50 30	166 21 30	47	46	37.8	95	gn. m. s.
3649	Aug. 25	54 41 00	166 15 30	47	45	37.7	171	rky.
3650	Aug. 25	54 32 00	166 09 00	47	45	37.8	264	rky.
3651								
		Off Southern California, west of Cortez and Tanner banks.						
3652	Apr. 13	33 06 00	119 17 00	58	56	39.1	892	fne. s. m.
3653	Apr. 13	32 38 00	119 36 00	55	55	45.4	180	fne. gy. s
3654	Apr. 13	32 30 00	119 43 00	55	55	38.6	659	crs. gy. s.
		Eastern portion of Bering Sea south of Pribilof Islands.						
	1896.							
b 3655	July 7	54 51 00	167 46 00	43	43	36.4	671	gn. m. bk. vol. s.
		From Bering Isd. to Kamchatka coast. a						
			Long. E.					
c 3660	Aug. 9	55 11 30	165 39 00	52	48	-------	41	fne. gy. s. bk. sh.
3661	Aug. 9	55 08 30	165 26 00	49	49	35	2,250	fne. gy. s. bk. p. c.
3662	Aug. 9	54 49 42	164 36 00	52	49	35	2,665	m. fne. dk. s. p.
3663	Aug. 10	54 51 00	163 46 00	54	49	35.2	3,117	bn. m. fne. dk. s.

a Except station Hy. 3660, geographical positions on this line are independent of shore features.
b No records for Nos. 3656 to 3659, inclusive.
c Accepting position of Ari Kamen, Bering Island, as plotted on Stejneger's map, it bore NE. by E. ¼ E. (mag.), distant 3 miles from Hy. 3660.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. E.	Air.	Surface.	Bottom.		
		From Bering Isd. to Kamchatka coast.						
	1896.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.	
a 3664	Aug. 10	54 42 30	162 55 00	57	50	35	2,077	bn. m. dk. s. p.
b 3665	Aug. 10	54 35 00	162 11 30	53	44	38	473	bn. m. dk. s. p.
c 3666	Aug. 10	54 32 30	161 58 30	53	44	37.4	586	bn. m. fne. s. p.
d 3667	Aug. 10	54 29 00	161 50 00	54	45	37	453	bn. m. dk. s. p.
		Southeast coast of Kamchatka. e						
3668	Aug. 20	51 17 00	158 10 00	53	49	32.7	127	gn. m. co. dk. s. p.
		Along Kuril Chain. f						
3669	Aug. 21	48 43 00	154 31 00	44	41	36.7	425	crs. dk. s.
3670	Aug. 22	48 33 00	154 53 00	42	37	35.7	114	hrd.
3671	Aug. 22	48 32 00	154 55 00	41	37	-------	106	brk. sh.
3672	Aug. 22	48 36 00	153 59 00	45	42	36.7	304	crs. g.
3673	Aug. 22	48 26 00	153 33 00	47	45	34.7	1,102	crs. dk. s. p
3674	Aug. 23	48 19 00	153 23 00	48	44	35.7	1,001	bk. s. p.
3675	Aug. 23	48 13 00	153 20 00	48	49	36.3	624	bk. s.
g 3676 (*h*)	Aug. 24	47 35 00	152 48 30	45	38	35.7	96	rky.
		Sea of Okhotsk from Lower Ushishir Island to Robben Island. i						
j 3679	Aug. 26	47 31 30	152 45 48	45	39	38.7	37	p.
k 3680	Aug. 26	47 31 30	152 39 00	45	40	35.7	63	p.
l 3681	Aug. 26	47 31 42	152 32 00	44	39	35.2	1,164	fne. gy. s.
m 3682	Aug. 26	47 32 00	152 21 00	44	39	34.7	1,500	bn. m. fne. gy. s.
n 3683	Aug. 26	47 33 00	152 07 00	47	39	35.2	1,712	fne. gy. s.
3684	Aug. 26	47 36 00	151 46 00	53	53	-------	1,830	bn. m. dk. s.
3685	Aug. 26	47 40 30	151 05 00	49	50	35.7	1,836	bn. m. fne. s.
3686	Aug. 27	47 45 00	150 23 30	43	47	35.9	1,836	bn. m. fne. s.
3687	Aug. 27	47 50 00	149 42 00	48	50	36	1,843	bn. and yl. m. fne. s.
3688	Aug. 27	47 55 30	148 56 00	55	55	35.8	1,562	bn. m. fne. s.
3689	Aug. 27	48 01 30	148 16 30	55	55	36	1,426	bn. m. fne. s.
3690	Aug. 27	48 08 00	147 34 00	56	56	36	964	lt. bn. m. qtz. s.
3691	Aug. 28	48 15 00	146 51 00	57	59	36	796	lt. bn. m. qtz. s.
3692	Aug. 28	48 21 00	146 08 00	58	56	36.2	698	bn. m. fne. s.
3693	Aug. 28	48 27 45	145 20 30	58	56	33	155	bn. m. crs. vol. s.
3694	Aug. 28	48 31 48	144 54 51	57	48	35	27	fne. g. r. sh.
3695	Aug. 28	48 29 00	144 42 30	58	51	-------	16	rky.
		Sea of Okhotsk from Robben Island to Iturup Island. o						
3696	Sept. 2	48 22 00	144 41 00	55	47	40	20	fne. s. p.
3697	Sept. 2	48 05 00	145 01 00	54	55	31	71	bl. m.
3698	Sept. 3	47 43 00	145 28 00	54	54	37	631	gn. m. s.
3699	Sept. 3	47 20 30	145 54 00	53	56	35.9	1,584	gn. m. fne. s.

a Serial temperatures to 1,000 fathoms.

b 97° 33′ Ext. Rt. Pt. to Cape Kosloff. 95° 08′ first Pt. left of Ext. Rt. Pt. to Kosloff. 77° 02′ Ext. Rt. Pt. to Mt. Kronotski.

c 102° 43′ Ext. Rt. Pt. to Kosloff. 91° 03′ Ext. Rt. Pt. to Kronotski. 5° 07′ Kosloff to detached rock. Ext. Right Point, N. 16° E. (mag.). Mt. Kronotski, N. 74° W. (mag.). Cape Kosloff, N. 86° 15′ W. (mag.).

d 73° 56′ Ext. Rt. Pt. to Kosloff. 1° 12′ Kosloff to detached rock. Cape Kosloff, N. 46° 30′ W. (mag.).

e Geographical positions, approximate, without relation to shore features.

f Geographical positions, approximate, without relation to shore features, except station Hy. 3676.

g Position referred to obs. spot at Old Village, Lower Ushishir Island, as in lat. 47° 30′ 56.8″ N., long. 152° 47′ 55″ E., determined by this vessel,

h Nos. 3677 and 3678 missing.

i Geographical positions on this line referred to obs. spot at Old Village, Lower Ushishir Island, as in lat. 47° 30′ 56.8″ N., long. 152° 47′ 55″ E. Robben Island is assumed to be in lat. 48° 31′ 30″ N., long. 144° 43′ 38″ E.

j Babuskin Rock, south (true) ½ mile.

k SW. end Lower Ushishir, S. 68° E., true; S. end Ketoy, S. 48° W., true.

l SW. end Lower Ushishir, S. 80° E., true; S. end Ketoy, S. 28° W., true.

m SW. end Lower Ushishir, S. 92° E., true; S. end Ketoy, S. 14° E., true.

n Right end Ketoy, S. 44° E., true; North Ushishir Peak, S. 86° E., true.

The five preceding bearings are all independent of geographical positions of the stations and have not been adjusted.

o Positions on this line are geographical, without relation to shore features. Position given on B. A. chart No. 2405, of Shana Village, Iturup Island, is accepted. Lat. 45° 15′ N., long. 147° 56′ E.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Serial No.	Date.	Position.		Temperature.			Depth.	Character of bottom.
		Lat. N.	Long. E.	Air.	Surface.	Bottom.		
		Sea of Okhotsk from Robben Island to Iturup Island.						
	1896.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	*Fms.*	
3700	Sept. 3	46 58 00	146 20 00	57	53	35.9	1,818	gn. m. fne. s.
3701	Sept. 3	46 35 00	146 49 00	62	55	36	1,820	lt. bn. m. s.
3702	Sept. 3	46 15 00	147 07 00	55	55	35.8	1,817	bn. m. fne. s.
3703	Sept. 4	45 48 00	147 22 00	53	54	36	1,825	gn. m. fne. s.
3704	Sept. 4	45 40 00	147 28 00	53	53	35.9	1,761	gn. m. fne. s.
3705	Sept. 4	45 31 30	147 32 30	53	54	36	1,078	bn. m. fne. s.
3706	Sept. 4	45 23 00	147 39 30	54	54	36	1,107	bn. m. fne. s.
3707	Sept. 4	45 18 00	147 42 00	54	54	36.5	668	bn. m. crs. s.
		*Sea of Okhotsk from Iturup Island toward La Perouse Straits.**						
3708	Sept. 6	45 16 00	147 52 00	64	58	50	27	dk. gy. s.
3709	Sept. 6	45 16 30	147 45 00	64	58	35.7	312	gn. m. fne. s.
3710	Sept. 6	45 18 00	147 31 00	60	55	36	810	gn. m. s.
3711	Sept. 6	45 19 00	147 09 00	60	54	36	1,641	gn. m. fne. s.
3712	Sept. 6	45 21 00	146 27 00	60	58	35.8	1,744	gn. m. fne. s.
3713	Sept. 7	45 23 00	145 46 00	61	58	36	1,700	gn. m. s.
3714	Sept. 7	45 25 00	145 02 00	60	57	35.9	1,649	gn. m. s.
3715	Sept. 7	45 27 00	144 21 00	62	54	36.5	468	gn. m. crs. s. p.
3716	Sept. 7	45 31 00	143 38 00	62	56	33	122	gy. s.
3717	Sept. 7	45 34 00	143 12 00	61	57	34	68	gn. m.
3718	Sept. 7	45 36 30	142 58 00	60	59	32	62	gn. m.
		Santa Catalina Island, California.						
	1897.	Lat. N.	Long. W.					
	Apr. 6	Entrance to Isthmus Cove.		60	56	.....	12–15	gy. s. sh. rky.
	Apr. 7	1½′ E. by N. of Avalon, Dakins Cove.		66	59	.....	48	fne. gy. s.
3719	Apr. 7	....do.....		66	59	.....	48	fne. gy. s.
3720	Apr. 7	1½′ E. by N. of Avalon, Dakins Cove.		66	59	.....	47	fne. gy. s.
	Apr. 7	Off east end Santa Catalina Island.		66	59	.....	52	fne. gy. s.
	Apr. 7	South of east end Santa Catalina Island.		66	59	.....	44	fne. gy. s.
	Apr. 7	....do.....		66	59	.....	38	fne. gy. s. hk. sh.
	Apr. 8	Off east end Santa Catalina Island.		66	58	51.7	50	fne. gy. s.
	Apr. 8	....do.....		66	58	52	50	fne. gy. s.
	Apr. 8	Rocks, east entrance Dakins Cove.		72	59	.....	(?)	rky.
3721	Apr. 9	33 17 20	118 24 40	69	60	.....	77–132	rky.
3721*a*	Apr. 9	Near preceding position.		72	60	.....	77–132	rky.
		Monterey Bay and vicinity, Cal.						
	Apr. 12	Anchorage, Santa Cruz.		62	55	.....	6	gy. s. m.
3722	Apr. 13	36 44 30	121 52 00	57	55	49	45	gy. s. m.
	Apr. 13	Anchorage, Monterey Harbor.		64	58	.....	6	s. m.
	Apr. 14	....do.....		58	55	.....	6	s. m.
	Apr. 17	....do.....		58	56	.....	7	s. m.
	Apr. 18	....do.....		61	54	.....	7	s. m.
3723	Apr. 22	36 56 30	122 09 00	52	51	.....	26	gy. s.
3724	Apr. 24	37 37 30	123 02 00	60	51	49	68	gy. s. co. r.
3725	Apr. 24	37 41 00	123 03 00	60	51	49	45	rky.
3726	Apr. 24	37 41 00	123 04 00	60	51	49	50	rky.
†3727	Apr. 24	37 41 00	123 00 00	60	51	49	30–40	rky.

*Positions geographical, without relation to shore features. Position given on B. A. chart No. 2405, of Shana Village, Iturup Island, is accepted. Lat. 45° 15′ N., long. 147° 56 E.

†Numbers 3728 to 3777, inclusive, missing from the records.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Nos.		Date.	Position.		Temp.		Depth.	Character of bottom.
Ser.	A.A.		Lat. N.	Long. W.	Surf.	Bot.		
			California to Marquesas Islands.					
		1899.	° ′ ″	° ′ ″	° F.	° F.	Fms.	
3778	1	Aug. 26	31 10 00	125 00 00	64	.....	1,955	No specimen.
3779	4	Aug. 29	24 45 00	130 16 00	68	34.6	2,628	lt. br. vol. oz.
3780	5	Aug. 30	22 42 00	131 54 00	70	34.6	2,740	br. vol. oz.
3781	6	Aug. 31	20 26 00	133 28 00	75	.....	2,810	dk. br. vol. oz.
3782	7	Sept. 1	18 19 00	134 57 00	76	.....	2,881	dk. br. vol. oz.
3783	8	Sept. 2	17 13 00	136 09 00	76	.....	2,766	No specimen.
3784	9	Sept. 2	16 52 00	136 12 00	76	.....	3,003	No specimen.
3785	11	Sept. 3	14 38 00	136 44 00	79	.....	2,646	lt. br. vol. oz.
3786	12	Sept. 4	12 07 00	137 18 00	81	.....	2,883	lt. br. rad. oz.
3787	14	Sept. 7	6 41 00	137 00 00	82	.....	2,776	lt. gy. glob. oz.
3788	15	Sept. 8	4 35 00	136 54 00	80	.....	2,583	lt. gy. oz. glob. rad.
3789	16	Sept. 9	2 38 00 Lat. S.	137 22 00	80	35.2	2,440	lt. gy. glob. oz.
3790	18	Sept. 13	6 25 00	138 59 00	80	35	2,475	lt. gy glob. oz.
3791	19	Sept. 13	7 58 00	139 09 00	79	.....	2,287	gy. yl. oz. crs. glob.
3792	20	Sept. 14	8 13 00	139 10 00	79	35.1	2,267	gy. yl. oz. crs. glob.
3793	21	Sept. 14	8 28 00	139 12 00	79	.....	2,183	gy. yl. oz. crs. glob.
3794	22	Sept. 14	8 31 00	139 26 00	79	.....	1,939	gy. yl. oz. crs. glob.
3795	23	Sept. 14	8 33 00	139 36 00	80	35.5	1,802	gy. yl. oz. crs. glob.
3796	24	Sept. 14	Haunanu Point, Ua Huku Island, Marquesas, S. 43° E., 1½ m.		80	.....	1,040	gn. oz. lav.
3797	25	Sept. 14	Haunanu Point, Ua Huka Island, E., dist. 17 m.		80	.....	1,173	gy. vol. oz.
3798	27	Sept. 15	Cape Martin, Nukuhiva Isl., N. 30° E., dist. 6½ m.		80	39.5	687	drab vol. oz. glob.
3799	28	Sept. 17	Chichikoff Point, Nukuhiva Isl., N. 13° E., 8 m.		80	.....	1,284	vol. r.
3800	29	Sept. 17	9 16 00	140 25 00	80	34.9	1,932	lt. gy. vol. oz. glob.
3801	30	Sept. 18	10 29 00	141 52 00	81	35	2,456	lt. gy. vol. oz. glob.
			Paumotu Islands.					
3802	32	Sept. 20	13 37 00	145 42 00	80	35	2,451	red c. foram.
3803	33	Sept. 20	Ent. Ahii Lagoon, S. 28° W., 22 m.		81	.....	2,527	red c.
3804	34	Sept. 20	Ent. Ahii Lagoon, SE., 2.5 m.		81	.....	1,208	lt. gy. oz. glob.
3805	35	Sept. 21	14 42 00	147 08 00	80	.....	1,462	lt. gy. oz. glob. frag.
3806	36	Sept. 21	Ent. Avatoru Pass, Rahiroa Atoll, S. 44° W., 16 m.		80	.....	706	vol. r.
3807	37	Sept. 24	Ent. Avatoru Pass, Rahiroa Atoll, S., ½ m.		80	.....	112	wh. co. s.
3808	38	Sept. 24	Ent. Avatoru Pass, Rahiroa Atoll, S., 1.5 m.		80	.....	604	brk. sh.
3809	39	Sept. 24	Ent. Avatoru Pass, Rahiroa Atoll, S., 2.5 m.		80	.....	645	fne. wh. co. s.
3810	40	Sept. 24	Ent. Avatoru Pass, Rahiroa Atoll, S., 3.5 m.		80	.....	661	wh. co. s. glob. oz. min. frag.
3811	41	Sept. 24	Ent. Avatoru Pass, Rahiroa Atoll, S., 5.5 m.		81	.....	684	wh. co. s. glob. oz. min. frag.
3812	42	Sept. 24	Ent. Avatoru Pass, Rahiroa Atoll, S., 7.5 m.		81	.....	819	wh. co. s. glob. oz. vol. part.
3813	43	Sept. 24	15 13 10	147 53 10	82	.....	341	wh. co. s. glob. pter.
3814	44	Sept. 24	15 14 10	147 51 5	82	.....	391	wh. co. s. sh. glob.
3815	45	Sept. 25	15 15 00	147 51 35	82	.....	524	wh. co. s. brk. sh.
3816	46	Sept. 24	15 16 50	147 52 30	80	.....	450	pter. oz. vol. part.
3817	47	Sept. 24	15 19 35	147 53 40	82	.....	764	wh. co. s. vol. part.
3818	48	Sept. 24	15 24 10	147 56 00	80	.....	897	glob. pter. vol. part.
3819	49	Sept. 25	15 25 00	148 08 00	80	.....	1,123	wh. co. s. glob. vol. part.
3820	50	Sept. 25	15 25 50	148 24 25	80	.....	1,486	glob. oz. vol. part.
3821	51	Sept. 25	15 02 00	148 24 00	80	.....	488	wh. co. s.
3822	52	Sept. 25	15 01 40	148 25 00	80	.....	670	wh. co. s.
3823	53	Sept. 25	15 01 00	148 27 00	81	.....	782	wh. pter. oz. vol. part.
3824	54	Sept. 25	15 00 20	148 30 00	81	.....	850	wh. pter. glob. oz.
3825	55	Sept. 25	14 58 35	148 35 00	81	.....	844	wh. glob. oz. mang. vol. part.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Nos.		Date.	Position.		Temp.		Depth.	Character of bottom.
Ser.	A.A.		Lat. S.	Long. W.	Surf.	Bot.		
			Paumotu Islands.					
		1899.	° ′ ″	° ′ ″	° *F.*	° *F.*	*Fms.*	
3826	56	Sept. 25	14 56 00	148 44 00	81	.....	711	wh. pter. oz.
3827	57	Sept. 25	14 53 20	148 42 30	80	.....	486	crs. wh. co. s. vol. part.
3828	58	Sept. 25	14 51 20	148 51 20	80	.....	624	wh. co. s.
3829	59	Sept. 25	14 56 00	148 48 00	80	.....	860	wh. co. s. glob. vol. part.
3830	60	Sept. 25	15 00 30	148 47 00	80	.....	1,257	wh. co. s. glob. vol. part.
3831	61	Sept. 25	15 16 00	148 46 00	79	.....	1,762	lt. gy. oz. glob.
3832	62	Sept. 26	15 33 00	148 45 00	80	.....	2,267	lt. gy. oz. glob.
3833	63	Sept. 26	15 42 00	148 44 00	80	.....	2,243	vol. m. glob.
3834	64	Sept. 26	West coast Makatea Id., E. 1.3 m.		80	.....	581	crs. wh. co. s.
3835	65	Sept. 26	South coast Makatea Id., N. 5 m.		80	.....	1,363	wh. co. s. mang. nods.
3836	66	Sept. 26	16 10 00	148 26 00	80	.....	2,238	vol. m. glob. mang. nods.
3837	67	Sept. 27	16 32 00	148 40 00	80	.....	2,363	vol. m. glob.
3838	68	Sept. 27	16 57 00	148 58 00	79	.....	2,224	vol. m. glob.
3839	69	Sept. 27	17 14 00	149 10 00	80	.....	1,930	no spec.
3840	70	Sept. 27	17 21 00	149 15 00	80	.....	1,585	vol. m.
3841	71	Sept. 27	Point Venus, Tahiti Id., S. 32°, W. 4.2 m.		80	.....	775	crs. vol. s. mang. nods.
3842	72	Sept. 27	Point Venus, Tahiti Id., S. 54°, E. 4 m.		79	.....	867	co. vol. s.
3843	73	Oct. 5	Point Venus, Tahiti Id., S. 55°, E. 3.8 m.		79	.....	807	fne. vol. s. m.
3844	75	Oct. 5	North shore, center Tetiaroa Atoll, S. 45°, W. 6 m.		80	.....	1,592	gy. vol. m. glob. oz.
3845	76	Oct. 6	15 56 20	147 40 00	80	35.0	2,269	lt. br. vol. m.
3846	77	Oct. 7	16 03 00	147 11 00	78	36.0	1,321	glob. oz. vol. part.
3847	78	Oct. 7	16 08 00	146 42 00	79	39.0	609	glob. oz.
3848	79	Oct. 7	Village west side Niau Atoll, E. ½ m.		79	.....	252	co. s. glob. oz.
3849	80	Oct. 7	Village west side Niau Atoll, NE. 1.75 m.		80	.....	491	co. s. pter. oz.
3850	81	Oct. 7	Niau Atoll, S. 3°, E. 14 m.		80	.....	677	co. s. glob. oz.
3851	82	Oct. 7	Apataki, south end, N. 9 m.		80	.....	675	pter. oz.
3852	83	Oct. 7	Pakaka entrance Apataki Lagoon, NE. ½ m.		80	.....	333	co. s.
3853	84	Oct. 8	Pakaka entrance Apataki Lagoon, N. 50°, E. 2 m.		80	39.4	613	co. vol.
3854	85	Oct. 8	Pakaka entrance Apataki Lagoon, N. 55°, E. 1 m.		80	.....	520	co. s.
3855	86	Oct. 8	Northwest point Apataki, SE. 1 m.		80	38.8	654	crs. co. s.
3856	87	Oct. 8	Northeast point Apataki, SW. 7 m.		80	.....	1,364	crs. co. s.
3857	88	Oct. 9	Center Tikei, Id., E. ½ m.		80	.....	360	crs. co. s.
3858	89	Oct. 14	Ngaruae Pass, Fakarava Atoll, S. 28°, E. 1 m.		80	.....	599	crs. co. s
3959	90	Oct. 14	Ngaruae Pass, Fakarava Atoll, S. 35°, E. 3.5 m.		80	.....	666	pter. oz. vol. part.
3860	91	Oct. 14	Southwest end Fakarava, NE. 2 m.		80	.....	602	co. s. pter. oz.
3861	92	Oct. 14	16 44 00	145 35 00	80	.....	839	fne. co. s. mang.
3862	93	Oct. 14	16 51 00	143 42 00	80	.....	1,300	yl. glob. oz.
3863	94	Oct. 14	16 57 00	145 49 00	79	.....	1,531	fne. vol. m. glob.
3864	95	Oct. 15	17 09 00	146 00 00	78	36.1	1,079	lt. yl. glob. oz.
3865	96	Oct. 15	17 14 30	145 49 00	77	39.7	527	co. s. mang.
3866	97	Oct. 15	17 17 00	145 45 30	79	.....	804	glob. oz. mang.
3867	98	Oct. 15	Northwest point Anaa Atoll, E. 5 m.		79	.....	642	pter. oz. mang. nods.
3868	99	Oct. 15	Northwest face Anaa Atoll, S. 1.3 m.		79	39	568	crs. co. s. mang. globs.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Nos.		Date.	Position.		Temp.		Depth.	Character of bottom.
Ser.	A. A.		Lat. S.	Long. W.	Surf.	Bot.		
			Paumotu Islands.					
		1899.	° ′ ″	° ′ ″	° F.	° F.	Fms.	
3869	100	Oct. 15	North entrance Anaa Lagoon, S. ¼ m.		80	-------	225	wh. co. s.
3870	101	Oct. 15	Village, point Anaa Atoll, S. 50°, W. 5 m.		80	36.0	1,110	fne. co. s. pter. oz. glob.
3871	102	Oct. 15	17 10 00	145 19 00	82	36.0	1,679	lt. gy. glob. oz.
3872	103	Oct. 15	17 03 00	145 08 30	82	35.1	1,733	glob. oz.
3873	104	Oct. 15	Southwest point Tahanae, N. 68°, E. 4 m.		81	-------	966	glob. oz. mang.
3874	105	Oct. 15	Southwest point Tahanae, E. 2 m.		80	38.6	654	co. s. mang.
3875	106	Oct. 16	Southwest point Tahanae, about ½ mile off-shore, NE. 3 m.		80	-------	269	crs. co. s.
3876	107	Oct. 16	Northwest entrance Makemo Lagoon, SE. 1 m.		80	-------	467	wh. co. s.
3877	108	Oct. 16	Northwest point Makemo Atoll, S. 4 m.		80	-------	856	crs. co. s. pter. glob. oz.
3878	109	Oct. 16	16 13 00	143 48 00	80	-------	987	glob. pter. vol. parts.
3879	110	Oct. 17	16 03 00	143 32 30	80	36.3	1,084	gy. yl. glob. oz.
3880	111	Oct. 17	15 53 00	143 26 00	80	35.2	1,805	gy. yl. glob. oz.
3881	112	Oct. 17	15 54 00	143 06 00	80	35.4	1,568	glob. oz. mang.
3882	113	Oct. 17	15 55 00	142 39 00	80	-------	1,503	lt. br. glob. oz.
3883	114	Oct. 17	Northwest Pass Raroia, SE. 5 m.		80	35.7	1,385	gy. yl. glob. oz. mang. parts.
3884	115	Oct. 17	Northwest point Raroia, SE. ½ m.		81	40.2	508	crs. co. s. pter. oz.
3885	116	Oct. 18	Southwest point Takume Atoll, NE. 1.5 m.		79	38.7	572	crs. co. s.
3886	117	Oct. 18	Midway between Raroia and Takume atolls.		79	38.0	563	mang. part.
3887	118	Oct. 18	Southwest point Raroia Atoll, NE. 1 m.		80	38.2	630	co. s. mang.
3888	119	Oct. 18	16 14 00	142 50 00	80	35.5	1,516	glob. oz. mang.
3889	120	Oct. 18	Southwest face Taenga Atoll, N. 67°, E. 3 m.		80	36.5	928	glob. pter. oz.
3890	121	Oct. 19	16 25 00	143 33 00	79	36.1	1,108	glob. oz. mang.
3891	122	Oct. 19	16 30 00	143 41 00	79	39.7	540	co. s. pter. oz.
3892	123	Oct. 25	Northeast pass Makemo, S. 1 m.		80	39.0	603	crs. co. s.
3893	124	Oct. 25	East point Makemo, N. 78°, W. 11 m.		79	36.0	1,221	glob. mang.
3894	125	Oct. 26	Midway between Marutea and Nihiru Ids.		79	36.0	1,135	glob. oz.
3895	126	Oct. 26	17 07 00	142 49 00	79	35.9	1,235	glob. mang.
3896	127	Oct. 26	Tekokoto Atoll, E. 1 m.		79	38.4	617	co. s.
3897	128	Oct. 26	Center Hikueru Atoll, S. 6 m.		80	36.6	1,600	pter. oz. glob.
3898	129	Oct. 27	Northwest point Hikueru Atoll, E. ½ m.		80	43.8	348	co. s. brk. sh.
3899	130	Oct. 27	Northwest point Hikueru Atoll, E. 1.3 m.		80	37.8	798	co. s. pter. oz.
3900	131	Oct. 28	Midway between Hikueru and Marokau.		79	35.7	1,372	glob. oz.
3901	132	Oct. 28	Northwest point. Marokau, E. 8 m		77	35.6	1,620	glob. oz. mang.
3902	135	Oct. 28	Pass between Marokau and Ravahere.		79	48.1	278	fne. co. s. mang. glob.
3903	136	Oct. 28	18 08 00	141 49 00	79	35.2	2,187	vol. m. glob.
3904	137	Oct. 29	18 07 00	141 26 00	78	-------	1,713	glob. oz.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Nos.		Date.	Position.		Temp.		Depth.	Character of bottom.
Ser.	A.A.		Lat. S.	Long. W.	Surf.	Bot.		
			Paumotu and Society Islands.					
		1899.	° ′ ″	° ′ ″	° F.	° F.	Fms.	
3905	138	Oct. 29	Northwest point Hao Atoll, SE. ½ m.		79	42.0	425	crs. co. s.
3906	140	Oct. 29	18 27 00	140 21 00	77	35.1	2,042	fne. co. s. glob.
3907	141	Oct. 30	18 29 00	139 53 00	78	35.0	1,490	glob. mang.
3908	142	Oct. 30	18 30 00	139 30 00	78	35.1	2,103	fne. vol. m. glob.
3909	143	Oct. 30	Aki Aki Atoll, E. 5 m		78	35.6	1,364	glob. mang.
3910	144	Oct. 30	Southwest point Aki Aki, E. 1 m.		79	43.0	377	co. s.
3911	145	Oct. 30	Aki Aki Atoll, N. 5 m		78	35.0	1,725	crs. co. s.
3912	146	Oct. 31	18 56 00	139 05 00	78	35.1	2,343	red c.
3913	147	Oct. 31	Northeast end Nukutavake, E. 6 m.		78	35.2	1,688	mang. glob
3914	148	Oct. 31	Northeast point Nukutavake, S. 1 m.		78	38.9	636	co. s.
3915	149	Oct. 31	Pinaki Atoll, SE. 3.5 m		78	37.0	860	glob. mang.
3916	150	Oct. 31	Pinaki Atoll, E. 1 m		79	41.0	486	crs. co. s. pter. oz.
3917	151	Oct. 31	Pinaki Atoll, N. 68°, E. 5 m.		79	35.0	1,907	glob. oz. vol. m.
3918	152	Oct. 31	19 35 00	139 13 00	78	35.1	2,335	red c. glob.
3919	153	Nov. 1	19 45 30	139 54 00	77	35.4	1,494	glob. mang.
3920	154	Nov. 1	19 52 00	140 16 00	77	35.0	2,284	red c. glob.
3921	155	Nov. 1	20 07 00	141 00 00	78	35.0	2,391	mang.
3922	156	Nov. 2	20 31 00	142 00 00	77	35.0	2,467	no spec.
3923	157	Nov. 2	Nukutipipi Atoll, NW. 5 m.		78	35.0	2,315	red c. glob.
3924	158	Nov. 2	Nukutipipi Atoll, NW. 1 m.		77	39.0	649	co. s. brk. sh.
3925	159	Nov. 2	Nukutipipi Atoll, S. 68°, E. 1 m.		77	.....	736	co. s. brk. sh.
3926	160	Nov. 2	Midway between Nukutipipi and Anu Anurunga.		78	35.5	1,609	co. s. mang. glob.
3927	161	Nov. 2	Anu Anurunga, W. 1 m.		78	39.0	574	crs. co. s. mang. pter. oz.
3928	162	Nov. 2	Anu Anurunga, SE. 1 m.		78	38.5	659	co. s. brk. sh. pter. oz.
3929	163	Nov. 2	Midway between Anu Anurunga and Anu Anuraro.		78	35.2	1,890	glob. oz.
3930	164	Nov. 2	Anu Anuraro Atoll, NW. ½ m.		78	40.7	438	co. s.
3931	165	Nov. 2	Anu Anuraro Atoll, SE. ½ m.		77	42.5	405	co. s. pter. oz. mang. part.
3932	166	Nov. 2	20 15 00	144 00 00	77	34.8	2,265	red c. mang.
3933	167	Nov. 3	20 02 00	144 28 00	78	34.9	2,524	sft. red c.
3934	168	Nov. 3	Hereheretue Atoll, W. 6 m.		77	35.0	1,719	glob. oz.
3935	169	Nov. 3	Hereheretue Atoll, W. 1 m.		78	39.5	594	crs. co. s.
3936	170	Nov. 3	Hereheretue Atoll, E. 0.3 m.		78	62.1	189	co. s. mang. part.
3937	171	Nov. 3	Hereheretue Atoll, SE. 5.3 m.		78	35.3	1,688	lt. br. glob. oz. mang. part.
3938	172	Nov. 3	19 22 00	145 47 00	77	35.0	2,322	vol. m. glob.
3939	174	Nov. 3	18 28 00	147 11 00	79	35.0	2,087	mang. nods.
3940	175	Nov. 5	South end Mehetia Island, NW. 14 m.		78	34.8	2,129	vol. m.
3941	176	.....	Southeast point Mehetia Island, NW. 1.25 m.		80	38.1	832	vol. co. s.
3942	177	.....	Northwest point Mehetia Island, S. ½ m.		80	69.0	142	vol. r. crs. co. s.
3943	178	.....	17 46 00	148 23 00	81	34.9	2,111	vol. s.
3944	179	.....	17 35 00	148 48 00	80	35.0	1,755	br. vol. s.
3945	180	.....	Northeast point Murea Island, SW. 5 m.		79	36.7	981	crs. vol. s. pter.
3946	181	.....	18 54 00	162 31 00	79	34.7	2,498	no spec.
			Cook to Marshall Islands.					
3947	182	.....	18 59 00	164 47 00	82	33.4	2,882	red c. glob.
3948	184	.....	20 15 00	172 00 00	80	34.0	3,141	red c.
3949	186	.....	21 18 00	173 51 00	77	34.2	4,540	lt. br. vol. m.
3950	187	Dec. 4	Fatumanga Isl., Vavau Group Tonga, E. 4 m.		79	.....	682	co. s. glob. pter. oz.
3951	188	Dec. 6	18 43 00	175 28 00	79	36.2	1,381	vol. m. glob. oz.
3952	189	Dec. 7	Equidistant from Mothe, Nomuka, and Yangasa Islands, Lau Group, Fiji.		79	42.9	453	co. s. glob. pter. oz.

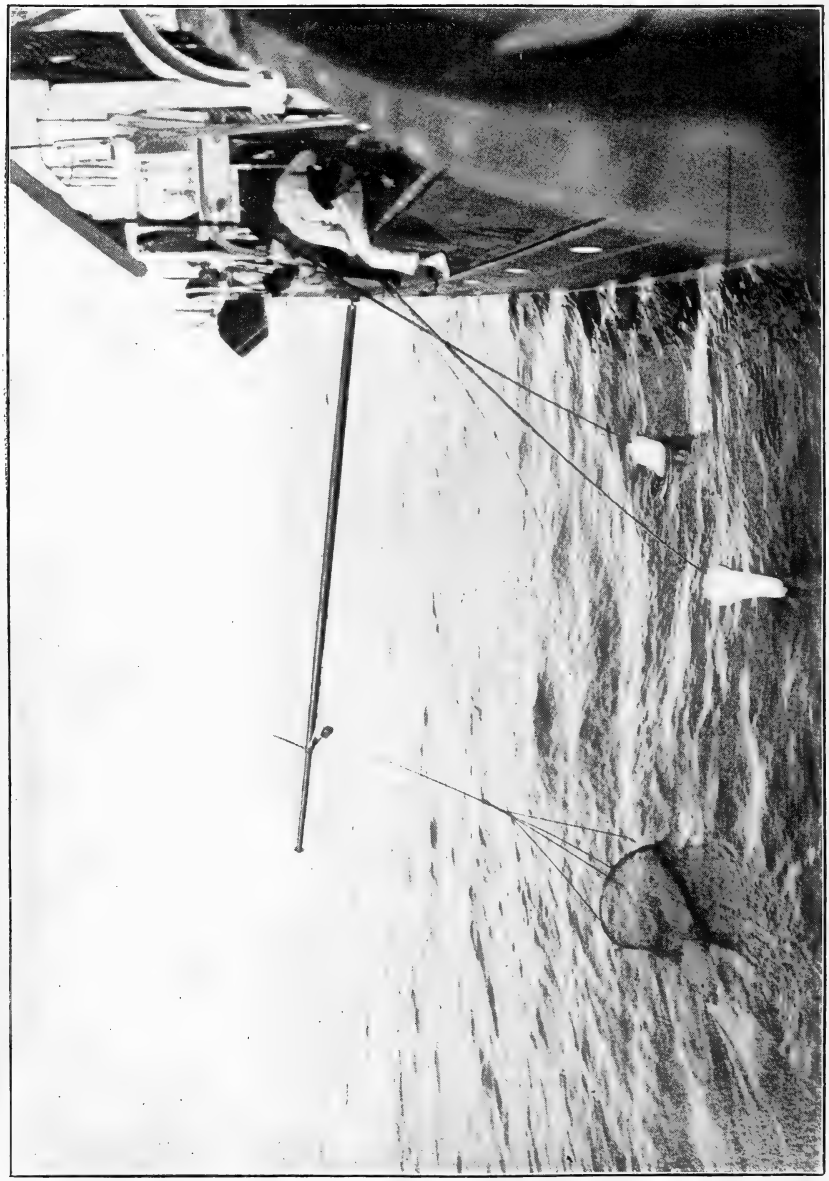
Record of hydrographic soundings of the Albatross, etc.—Continued.

Nos.		Date.	Position.	Temp.		Depth.	Character of bottom.
Ser.	A.A.		Lat. S. | Long. W.	Surf.	Bot.		
			Cook to Marshall Islands.				
		1899.	° ′ ″ | ° ′ ″	° *F.*	° *F.*	*Fms.*	
3953	190	Dec. 7	Between reefs of Yangasa and Nomuka groups.	79	47.0	324	co. s. mang.
3954	191	Dec. 7	West end Nomuka Isl., N 33°, E. 6 m.	79	39.2	600	co. s. pum. pter. oz.
3955	192	Dec. 7	Marembo Island, S. 2.7 m.	79	42.4	450	co. s. mang. pter. glob.
3956	193	Dec. 9	18 56 30 | 179 16 00 Long. E.	80	37.0	990	fne. co. s. oz.
3957	195	Dec. 22	South point Nurakita Island, N. ½ m.	86	--------	245	co.
3958	196	Dec. 23	Village, south coast Apamama Island, N. ¾ m.	88	--------	Did not sound.	
		1900.	Lat. N. |				
3959	197	Jan. 2	Abatiku Isl., Apamama Atoll, S. 63°, E. 16 m.	83	35.0	2,221	lt. gy. glob. oz.
3960	198	Jan. 2	South point Maiana Atoll, N. 55°, W. 9 m.	84	35.6	1,365	lge. yl. glob. oz.
3961	199	Jan. 2	Center south coast Tarawa, N. 10 m.	84	43.5	413	crs. br. glob. oz.
3962	200	Jan. 2	Center south coast Tarawa, N. ½ m.	84	--------	99	co.
3963	201	Jan. 2	South coast Tarawa, sta. No. 3963, N. ½ m., W. 1 m.	84	--------	208	co.
3964	202	Jan. 3	Southeast point Tarawa, N. 12°, W. 5 m.	84	35.3	1,569	glob. oz.
3965	203	Jan. 4	Apaiang Atoll, in line with north point Tarawa, N. 2 m.	84	51.3	170	gy. glob. oz.
3966	204	Jan. 4	1 52 00 | 173 15 00	84	34.9	2,156	gy. glob. oz.
3967	205	Jan. 4	Monument, west shore Maraki Atoll, S. 56°, E ½ m.	83	--------	431	no spec.
3968	206	Jan. 5	2 27 00 | 173 09 00	83	34.8	2,255	glob. oz.
3969	207	Jan. 5	2 49 00 | 173 01 00	83	35.3	1,461	glob. oz.
3970	208	Jan. 7	3 57 00 | 172 00 00	83	34.7	2,486	lt. yl. glob.
3971	209	Jan. 8	4 25 00 | 171 13 00	83	34.7	2,505	lt. gy. glob. oz.
3972	210	Jan. 8	4 54 00 | 170 21 00	83	34.7	2,444	glob. oz.
3973	211	Jan. 9	5 20 00 | 169 43 00	83	34.8	2,411	glob. oz.
3974	212	Jan. 9	South point Jaluit Atoll, N. 14°, E. 5 m.	82	35.0	1,937	crs. gy. glob. oz.
3975	213	Jan. 14	6 34 00 | 169 13 00	83	35.0	2,613	glob. oz. m.
3976	214	Jan. 15	Southeast point Elmore Atoll, N. 30°, W. 14 m.	82	35.0	2,136	crs. glob. oz.
3977	215	Jan. 15	Southeast point Elmore Atoll, N. 30, W. 9 m.	82	35.9	1,283	crs. glob. oz.
3978	216	Jan. 15	Wotju Island, Elmore Atoll, SE. 6 m.	82	36.5	1,068	co. s.
3979	217	Jan. 15	Midway between Wotju Island, Elmore Atoll, and Leuen Island, Namu Atoll, 12 m. from latter.	82	37.0	906	crs. glob. cz.
			Marshall to Ladrone Islands.				
3980	218	Jan. 15	South point Leuen Isl., Namu, N. 2 m.	83	39.7	630	crs. co. s.
3981	219	Jan. 15	8 02 00 | 167 43 00	82	35.0	2,179	glob. m.
3982	220	Jan. 16	South point Kwajalong Atoll, NE. 12 m.	82	35.0	1,897	glob. m.
3983	221	Jan. 18	Entrance South Pass, Rongelab, N. ½ m.	80	43.4	400	co. s.
3984	222	Jan. 18	Entrance South Pass, Rongelab, N. 1½ m.	81	39.0	746	crs. co. s.
3985	223	Jan. 18	10 49 00 | 167 15 00	80	35.0	2,469	glob. oz.
3986	224	Jan. 19	10 30 00 | 167 42 00	80	35.0	2,586	glob. oz. vol. part.
3987	225	Jan. 20	10 15 00 | 168 06 00	81	34.9	2,609	vol. m. glob.
3988	226	Jan. 20	Kapenor Island, Likieb, N. 63°, E. 8 m.	80	34.9	2,231	wh. glob. m.
3989	227	Jan. 21	S. Pass, Likieb, N. ½ m.	81	42.6	468	crs. co. s.
3990	228	Jan. 21	S. Pass, Likieb, N. 1½ m.	81	36.9	933	crs. co. s.
3991	229	Jan. 21	9 40 00 | 169 32 00	81	35.5	1,583	glob. oz.
3992	230	Jan. 23	Schischmarev Pass, Wotje, N. 1 m.	81	41.7	482	co. s.

Record of hydrographic soundings of the Albatross, etc.—Continued.

Nos.		Date.	Position.		Temp.		Depth.	Character of bottom.
Ser.	A.A.		Lat. N.	Long. E.	Surf.	Bot.		
			Marshall to Ladrone Islands.					
		1900.	° ′ ″	° ′ ″	° F.	° F.	Fms.	
3993	231	Jan. 23	Schischmarev Pass, Wotje, N. 3 m.		81	36.1	1,187	co. s. mang.
3994	232	Jan. 23	8 50 00	170 26 00	81	34.9	2,221	glob. oz.
3995	233	Jan. 24	7 54 00	170 56 00	81	36.5	1,009	crs. glob. oz.
3996	234	Jan. 24	North point Arhno Atoll, S. 50°, E. 7 m.		81	36.0	1,325	crs. glob. oz.
3997	235	Jan. 28	Southwest point Arhno Atoll, NE. 6 m.		82	36.0	1,253	glob. oz.
3998	236	Jan. 28	6 34 00	170 59 00	81	34.9	2,482	glob. m.
3999	237	Jan. 29	6 11 00	170 25 00	81	34.7	2,486	glob. m.
4000	238	Feb. 5	5 48 00	169 01 00	82	35.0	2,424	glob. oz.
4001	239	Feb. 9	Entrance Port Lottin, Kusaie, N. ¾ m.		82	43.5	371	vol. co. s.
4002	240	Feb. 13	6 49 00	156 36 00	82	34.9	2,475	glob. oz. vol. m.
4003	241	Feb. 13	6 51 00	154 39 00	81	35.0	2,533	glob. m. vol. part.
4004	242	Feb. 14	6 55 00	152 40 00	82	41.5	525	crs. co. s.
4005	243	Feb. 15	South Island, Royalist Cluster Truk Group, NW. 17 m.		82	35.0	2,162	gy. glob. m. vol. parts.
4006	244	Feb. 17	8 06 00	151 08 00	81	35.0	2,205	glob. m.
4007	245	Feb. 18	9 31 00	149 36 00	81	35.0	2,735	red c.
4008	246	Feb. 19	10 34 00	148 25 00	81	35.0	2,993	red c. mang.
4009	247	Feb. 20	11 35 00	147 15 00	80	35.0	3,213	red c. mang. pum.
4010	248	Feb. 20	12 51 00	145 46 00	81	35.8	*a* 4,813	red c. mang. pum.
4011	249	Feb. 21	13 08 00	145 25 00	80	35.0	2,337	vol. s.
			East Coast Honshu Island, Japan.					
4012	.....	June 2	Inuboe Saki Light, S. 77°, W. 47 m.		72	.....	1,371	vol. s. part.
4013	.....	June 3	Inuboe Saki Light, S 74°, W. 76 m.		72	.....	1,759	vol. s. part.
4014	.....	June 3	Inuboe Saki Light, S. 73°, W. 96 m.		75	.....	3,800	vol. s. part.
4015	.....	June 3	Inuboe Saki Light, S. 72°, W. 118 m.		75	35.2	4,300	no spec.
4016	.....	June 3	Shioya Saki Light, N. 73°, W. 74 m.		66	35.1	2,976	no spec.
			East of Kuril Islands, North Pacific.					
4017	.....	June 16	Cape Rollin, N. 67°, W. 21 m.		36	.....	528	vol. s. fne. g.
			Cape Tschipunski, Kamchatka, eastward across Bering Sea.					
4018	.....	June 23	Cape Tschipunski, N. 33°, W. 9 m.		47	35.2	87	bk. vol. s. fne. g. co.
4019	.....	June 24	Cape Kosloff, N. 15°, W. / Cape Taschipunski, S. 82°, W.	each about 72 miles.	45	35	2,991	gn. m. vol. s.
4020	.....	June 24	S. E. end Bering Id., N. E. / Cape Kronotski, N. W.	each about 108 miles.	47	35	1,804	gy. vol. s.
4021	.....	June 26	W. end Attu Id., S. 90 m. appx.		45	35	2,166	fne. yl. vol. s.
4022	.....	June 27	54 31 00	179 21 00	45	38	282	gn. m. fne. vol. s.
4023	.....	June 27	54 31 00	179 30 00	45	37	636	gn. m. vol. s. wh. sp.
4024	.....	June 27	54 24 20	179 24 00	45	37.7	454	gn. m. fne. vol. s.
4025	.....	June 27	54 18 00	179 14 00	45	37.2	536	gy. m. fne. vol. s.
4026	.....	June 27	54 14 00	179 08 00	45	.....	897	no spec.
4027	.....	June 27	54 22 00	179 08 00	45	.....	708	gy. s.
4028	.....	June 27	54 40 00	179 08 00	45	.....	310	gy. vol. s. wh. sp.
4029	.....	June 27	54 47 20	179 08 00	45	.....	913	gy. s. c.
4030	.....	June 27	54 47 20	179 25 00	45	.....	1,279	gy. s.
4031	.....	June 27	54 47 20	179 54 00	45	.....	2,111	bn. m. bk. s.
				Long. W.				
4032	.....	June 27	54 50 00	177 11 00	46	35	2,086	vol. m.

a Deepest sounding by the *Albatross*.



THE ALBATROSS, WITH SURFACE AND DIP NETS IN USE.

TOW-NET RECORDS.

Record of surface tow-net stations of the Albatross, 1887–88. (Voyage around South America.)

Serial No.	Equivalent dredging station.	Date.	Time. Out.	Time. In.	Instrument used.	Position. Lat. N.	Position. Long. W.	Sky.	Sea.	Temperature. Air dry.	Temperature. Air wet.	Temperature. Surface water.	Barometer.
		1887.				° ′ ″	° ′ ″			° F.	° F.	° F.	
Sur. 1	.....	Nov. 22	4.15 p. m.	5.00 p. m.	3-foot net	34 13 00	74 13 30	Clear	Smooth	64	61	75	30.38
2	.....	Nov. 23	5.00 p. m.	6.15 p. m.	do	31 16 00	71 50 00	Slightly cloudy	do	68	65	70	30.30
3	2750	Nov. 27	6 52 p. m.	8.25 p. m.	do	18 40 00	63 30 00	Cloudy and rainy	Rough	81	80	80	29.84
4	2751	Nov. 28	10.00 a. m.	11.19 p. m.	do	16 54 00	63 12 00	Clear	Smooth	82	80	81	29.92
5	2753	Dec. 4	12.15 p. m.	2.01 p. m.	do	13 34 00	61 04 00	Part overcast	do	82	80	82	29.88
6	2754	Dec. 5	12.55 p. m.	2.15 p. m.	do	11 40 00	58 33 00	Slightly cloudy	do	85	83	83	29.84
7	2755	Dec. 7	12.50 p. m.	1.45 p. m.	do	8 04 00	52 47 00	Showery	do	83	82	81	29.88
						Lat. S.							
8	2756	Dec. 14	10.40 a. m.	11.30 a. m.	do	3 22 00	37 49 00	Light clouds	Rough	80	79	79	29.86
9	2760	Dec. 18	4.15 p. m.	5.30 p. m.	do	12 07 00	37 17 00	Clear	Smooth	84	81	80	29.96
10	2761	Dec. 26	12.45 p. m.	2.30 p. m.	do	15 39 00	38 32 54	Light clouds	Light swell	82	80	79	30.00
11	2762	Dec. 30	6.45 a. m.	6.55 a. m.	do	23 08 00	41 34 00	do	Smooth	76	76	70	29.88
		1888.											
12	2769	Jan. 15	11.40 a. m.	12.10 p. m.	do	45 22 00	64 20 00	Overcast	do	60	58	58	30.02
13	2770	Jan. 16	11.45 a. m.	12.05 p. m.	do	48 37 00	65 46 00	Light clouds	Very smooth	58	55	52	29.92
14	2771	Jan. 17	11.45 a. m.	11.55 a. m.	do	51 34 23	68 00 00	Clear	Smooth	49	46	50	30.14
15	.....	Feb. 24	8.05 a. m.	8.25 p. m.	2 Tanner combination nets	22 54 00	77 10 00	Moonlight	Very smooth	74	71	76	29.90
16	.....	Mar. 1	4.31 a. m.	4.45 a. m.	do	4 21 00	81 59 00	do	do	73	73	74	29.80
17	2792	Mar. 2	3.25 p. m.	4.15 p. m.	Tanner combination	00 37 00	81 00 00	Overcast	do	80	78	77	29.74
						Lat. N.							
18	2793	Mar. 3	6.40 a. m.	8.20 a. m.	do	1 3 00	80 15 00	do	Smooth	78	76	78	29.84
19	2794	Mar. 5	1.55 p. m.	2.15 p. m.	do	7 37 00	78 46 30	Hazy	Light swell	79	77	78	29.76
20	2795	Mar. 5	4.25 p. m.	4.45 p. m.	do	7 57 00	78 55 00	Light clouds	Very smooth	79	77	78	29.74
21	2796	Mar. 5	5.54 p. m.	6.15 p. m.	do	8 5 00	78 51 00	Hazy sundown	do	79	77	78	29.74
22	.....	Mar. 5	7.15 p. m.	10.25 p. m.		At anchor off Perlas Isds. Gulf of Panama.		Starlight	do	77	76	77	29.76
23	2799	Mar. 6	11.15 a. m.	11.35 a. m.	Tanner combination	8 44 00	79 09 00	Overcast	do	77	76	75	29.90
24	.....	Mar. 31	7.00 p. m.	7.30 p. m.	do	6 44 00	80 27 00	Clear starlight	Light swell	82	80	81	29.80
25	.....	Apr. 1	8.45 p. m.	12.00 midnight.	Scoop nets; electric lights	4 18 00	85 14 00	do	Very smooth	84	83	83	29.80
26	2806	Apr. 3	5.00 p. m.	7.35 p. m.	Tanner combination	00 30 00	88 37 30	Light clouds	Light swell	84	82	80	29.68
						Lat. S.							
27	2807	Apr. 4	5.31 a. m.	7.48 a. m.	do	00 24 00	89 06 00	Very cloudy	Smooth	79	79	79	29.74
28	.....	Apr. 7	8.00 p. m.	9.00 p. m.	Scoop nets, electric light	Off Hood Island, Galapagos Archipelago.		Clear starlight	do	82	81	80	29.80
29	2817	Apr. 15	9.45 a. m.	10.45 a. m.	Tanner combination	00 46 00	89 42 00	Light clouds	Very smooth	85	83	81	29.80
30	2818	Apr. 15	1.30 p. m.	2.20 p. m.	do	00 29 00	89 54 30	do	do	85	83	83	29.74
31	2819	Apr. 15	6.30 p. m.	7.30 p. m.	do	00 08 00	90 06 00	do	Smooth	82	82	82	29.72

Record of Tanner intermediate tow-net stations of the Albatross, 1891.

[Region from Panama and Galapagos Islands to Gulf of California.]

Serial No.	Date.	Time.	Position.		Temperature.			Depth.	Character of bottom.	Wind.		Drift.		Mean depth.	Remarks.
			Lat. N.	Long. W.	Air.	Surface.	Bottom.			Direction.	Force.	Towed at a depth.	Time towing.		
	1891.		° ′ ″	° ′ ″	°F.	°F.	°F.	Fms.				Fms.	Min.	Fms.	
3382 Dr	Mar. 7	8.50 a. m.	6 21 00	80 41 00	77	75	35.8	1,793	gn. m.	N	3	200	15	------	
3382 Dr	Mar. 7	9.53 a. m.	6 21 00	80 41 00	77	75	35.8	1,793	gn. m.	N	3	200	------	------	Hauled direct from 200 fathoms in 10 minutes; ship stationary.
3382 Dr	Mar. 7	10.23 a. m.	6 21 00	80 41 00	77	75	35.8	1,793	gn. m.	N	3	100	------	------	Hauled direct from 100 fathoms in 5 minutes; ship stationary.
3388 Dr	Mar. 9	10.31 a. m.	7 06 00	79 48 00	75	73	36.2	1,168	gn. glob. oz.	N	2	400	17	------	
2619 Hyd	Mar. 11	8.25 a. m.	7 31 00	78 42 30	72	68	36.5	1,100	gn. glob. oz.	N	2	300	19	------	
2619 Hyd	Mar. 11	9.44 a. m.	7 31 00	78 42 30	72	68	36.5	1,100	gn. glob. oz.	N	2	1,000	16	------	Sounded at 7.06 a. m. in 1,100 fms. Took second trial of net at 9.44 a. m., and finished at 11.56 a. m., having drifted into deeper water, as shown by soundings taken at 12.03 p. m. in 1,482 fms. Greatest amount of wire out while towing, 1,160 fms., the angle equaling depth of 1,000 fms.
2627 Hyd	Mar. 25	6.49 a. m.	0 36 00	82 45 00	80	81	36	1,832	gy. glob. oz.	WNW	1	1,773 1,739	20	1,756	Fathoms=mean depth at which towed net. Net was lowered to 1,740 fms. vertically, and veered to 1,800 fathoms at an angle between 10° and 15°, equaling a depth varying between 1,773 and 1,739 fms.
2628 Hyd	Mar. 26	9.14 a. m.	Lat. S. 0 13 00	84 52 00	81	81	------	------	------	Calm	0	214 234	20	224	Fathoms=mean depth at which towed net. Towed 14 minutes between 200 fathoms and surface to fill upper bag.
3414 Dr	Apr. 8	6.57 a. m.	Lat. N. 10 14 00	96 28 00	81	82	35.8	2,232	gn. m.	ENE	2	85 105	14	95	Fathoms=mean depth at which towed net.
3414 Dr	Apr. 8	7.47 a. m.	10 14 00	96 28 00	81	82	35.8	2,232	gn. m.	ENE	2	195 200	10	198	
3414 Dr	Apr. 8	8.49 a. m.	10 14 00	96 28 00	81	82	35.8	2,232	gn. m.	ENE	3	300	15	------	
3414 Dr	Apr. 8	10.00 a. m.	10 14 00	96 28 00	81	82	35.8	2,232	gn. m.	ENE	3	300	15	------	
3414 Dr	Apr. 9	10.04 a. m.	12 34 00	97 21 00	84	82	------	------	------	NNW	1	175	8	------	
2414 Dr	Apr. 9	8.03 p. m.	13 33 30	97 57 30	82	83	------	------	------	Calm	0	175	10	------	No soundings taken; depth estimated approximately as over 2,000 fathoms.
3414 Dr	Apr. 11	8.45 a. m.	16 32 00	99 42 00	79	80	------	------	------	WSW	1	300	10	------	
3414 Dr	Apr. 16	10.10 a. m.	17 39 30	102 11 30	77	76	------	------	------	W	2	175	15	------	
3436 Dr	Apr. 22	1.22 p. m.	27 03 40	110 53 40	75	72	37.2	905	bn. m. bk. sp.	WNW	1	800	15	------	Net dragged on bottom.
2637 Hy	Apr. 22	7.21 p. m.	27 20 00	110 54 00	72	71	38	773	bn. m. bk. sp.	WNW	1	700	15	------	
3437 Dr	Apr. 23	5.31 a. m.	27 39 40	111 00 30	71	70	40	628	bn. m. bk sp.	E	1	600	15	------	Do.
2638 Hy	Apr. 23	7.26 a. m.	27 38 00	111 04 00	72	72	39.2	622	bn. m. bk sp.	ENE	2	500	15	------	

Record of surface tow-net stations of the Albatross, 1891.

[Region from Panama and Galapagos to Gulf of California.]

Serial No.	Date.	Time.	Position.		Temperatures.		Depth.	Character of bottom.	Remarks.
			Lat. N.	Long. W.	Surface.	Bottom.			
	1891.		° ′ ″	° ′ ″	°F.	°F.	*Fms.*		
3353 Dr	Feb. 23	8.56 a. m.	7 06 15	80 34 00	73	39	695	gn. m	
3354 Dr	Feb. 23	1.25 p. m.	7 09 45	80 50 00	78	46	322	gn. m	
3356 Dr	Feb. 23	7.30 p. m.	7 09 30	81 08 30	83	40.1	546	sft. bl. m	15 miles from Mariato Point.
3357 Dr	Feb. 24	6.17 a. m.	6 35 00	81 44 00	83	38.5	782	Modern greensand	
3360 Dr	Feb. 24	5.20 p. m.	6 17 00	82 05 00	83	36.4	1,672	fne. bk. dk. gn s	
3361 Dr	Feb. 25	7.33 a. m.	6 10 00	83 06 00	82	36.6	1,471	gn. oz	
3363 Dr	Feb. 26	4.37 p. m.	5 43 00	85 50 00	83	37.5	978	wh. glob. oz	
3365 Dr	Feb. 27	1.30 p. m.	5 31 00	86 31 00	85	37	1,010	yl. glob. oz	
3366 Dr	Feb. 27	8.04 p. m.	5 30 00	86 45 00	84	37	1,067	yl. glob. oz	
3368 Dr	Feb. 28	7.21 a. m.	5 32 45	86 54 30	82	58.4	66	rky	
3370 Dr	Feb. 28	10.03 a. m.	5 36 40	86 56 50	84	54.8	134	rks. and s	At Cocos Island. Surface net at night.
3372 Dr	Mar. 1	5.51 p. m.	4 49 00	86 11 20	84	38.8	761	gy. glob. oz	Surface net 8 p. m.
3375 Dr	Mar. 4	6.36 a. m.	2 34 00	82 29 00	77	36.6	1,201	gy. glob. oz	
3376 Dr	Mar. 4	4.27 p. m.	3 09 00	82 08 00	78	36.3	1,132	gy. glob. oz	
3382 Dr	Mar. 7	10.46 a. m.	6 21 00	80 41 00	75	35.8	1,793	gn. m	Surface net 8.30 p. m.
3387 Dr	Mar. 8	7.21 p. m.	7 40 00	79 17 50	74	56.4	127	fne. gy. s	
3397 Dr	Mar. 11	6.32 p. m.	7 33 00	78 34 20	71	57.3	85	stf. gn m. brk	
3398 Dr	Mar. 23	3.16 p. m.	1 07 00	80 21 00	84	36	1,573	gn. oz	Off Galera Point.
3399 Dr	Mar. 24	6.37 a. m.	1 07 00	81 04 00	80	36	1,740	gn. oz	
			Lat. S.						
3400 Dr	Mar. 27	6.10 a. m.	0 36 00	86 46 00	81	36.0	1,322	lt. gy. glob. oz	
			Lat. N.						
3409 Dr	Apr. 3	7.24 p. m.	0 18 40	90 34 00	82	42.3	327	bk. s	Off Bindloe Island, 4 miles.
3412 Dr	Apr. 4	6.11 p. m.	1 23 00	91 43 00	82	38	918	r	5 miles off Wenman Island. Surface net 9 p. m.
3413 Dr	Apr. 5	8.34 a. m.	2 34 00	92 06 00	82	36	1,360	glob. oz. dk. sp	Surface net noon.
3414 Dr	Apr. 8	11.14 a. m.	10 14 00	96 28 00	82	35.8	2,232	gn. m	
3419 Dr	Apr. 11	5.59 p. m.	16 34 30	100 03 00	81	39	772	gn. m. bk. sp	
3433 Dr	Apr. 21	6.34 a. m.	25 26 15	109 48 00	69	36.5	1,218	br. m. bk. sp	
3434 Dr	Apr. 21	10.14 a. m.	25 29 30	109 48 00	70	36.4	1,588	br. m. bk. sp	
3435 Dr	Apr. 22	8.56 a. m.	26 48 00	110 45 20	70	37.3	859	br. m. bk. sp	
3436 Dr	Apr. 22	3.10 p. m.	27 34 00	110 53 40	72	37.2	905	br. m. bk. sp	

Record of tow-net stations of the Albatross, 1891, 1892.

[California to Hawaiian Islands.]

Serial No.[a]	Date.	Time.	Position.		Temperatures.			Depth at which used.	Condition of sea	Wind.		Drift.		Appearance of sky.	Remarks.
			Lat. N.	Long. W.	Air.	Surface.	Bottom.			Direction.	Force.	Direction.	Distance.		
	1891.		° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*						*Miles.*		
45	Oct. 13	11.26 a. m.	35 41 50	126 22 20	61	62	34.9	Surface	Moderate	WNW	2	SW. ½ S	0.5	Cloudy	Surface tow net.
54	Oct. 14	3.33 p. m.	35 03 30	129 05 00	67	66	35	do	Smooth	West	1	SW. ¼ S	.5	Clear	Do.
64	Oct. 15	7.12 p. m.	33 54 30	131 45 00	66	65	35	do	do	West	3	SW. ⅞ S	.5	do	Do.
69	Oct. 16	8.50 a. m.	33 24 00	133 01 00	67	67	35.5	do	do	Calm	0	SW. ¾ S	.5	Showery	Do.
74	Oct. 16	6.55 p. m.	30 04 30	133 56 30	67	67		do	do	SSE	2	SW. by S	.5	Clear	Do.
129	Nov. 8	11.49 a. m.	32 43 40	134 42 30	68	68	35.1	do	do	ENE	2	SSW. ⅞ W	.5	do	Do.
130	Nov. 8	2.50 p. m.	32 41 00	134 49 30	68	68		do	do	ENE	2	SSW. ⅞ W	.5	do	Do.
133	Nov. 8	7.25 p. m.	32 35 00	135 03 00	69	68		do	do	East	2	SSW. ⅞ W	.5	do	Do.
144	Nov. 9	8.43 p. m.	31 50 00	136 54 30	65	67		do	do	East	2	SW. by S	.5	Cloudy	Do.
149	Nov. 10	8.47 a. m.	31 27 00	137 47 00	67	68	35.1	do	do	ESE	2	SW. by S	.5	do	Do.
150	Nov. 10	11.04 a. m.	31 23 00	137 58 00	66	67		do	do	ESE	1	SW. by S	.5	Clear	Do.
152	Nov. 10	3.16 p. m.	31 14 30	138 19 00	70	69		330 fath.	do	East	2	SW. by S	.5	do	Tanner submarine net.
153	Nov. 10	6.00 p. m.	31 10 00	138 29 30	70	70	35	Surface	do	East	2	SW. by S	.5	do	Surface tow net.
154	Nov. 10	7.42 p. m.	31 05 00	138 40 00	68	70		do	do	East	2	SW. by S	.5	do	Do.
163	Nov. 11	1.10 p. m.	30 31 30	140 05 30	71	69		330 fath.	do	East	2	SW. by S	.5	do	Tanner submarine net.
165	Nov. 11	6.00 p. m.	30 23 00	140 26 30	69	69		Surface	do	East	2	SW. by S	.5	do	Surface tow net.
174	Nov. 12	2.43 p. m.	29 38 00	142 17 00	72	70		330 fath.	do	SE	1	SW. by S	.5	do	Tanner submarine net.
185	Nov. 13	3.34 p. m.	28 52 00	144 00 00	72	72	35.3	Surface	do	SE	2	SSW. ¾ W	.5	Cloudy	Surface tow net.
192	Nov. 14	9.42 a. m.	28 20 00	145 03 30	72	72		do	do	SE	2	SSW. ¾ W	.5	Clear	Do.
195	Nov. 14	6.00 p. m.	28 00 30	145 35 00	73	73		do	do	SE	1	SSW. ¾ W	.5	do	Do.
196	Nov. 14	7.29 p. m.	27 54 00	145 45 30	72	72	35.2	do	do	ESE	1	SSW. ¾ W	.5	do	Do.
204	Nov. 15	2.13 p. m.	27 06 00	147 14 00	75	74		100 fath.	do	ESE	1	SSW. ¾ W	.5	Cloudy	Tanner submarine net.
257	Nov. 20	2.45 p. m.	22 11 00	156 09 00	77	77	35.4	Surface	do	NNW	2	SSW. ½ W	.5	Clear	Surface tow net.
259	Nov. 20	7.26 p. m.	21 55 30	156 29 30	78	77		do	do	West	1	SSW. ¾ W	.5	do	Do.
286	Dec. 2	5.00 p. m.	21 15 49	157 44 27	76	75		do	do	NE	1.2	WNW	.5	do	Do.
452	Dec. 24	4.00 p. m.	29 52 30	138 24 00	63	67		do	do	ENE	3	NE. by E ⅜ E.	.5	Cloudy	Do.
	1892.														
540	Jan. 14	1.58 p. m.	35 19 30	125 21 30	62	58	35.1	300 fath.	do	North	2	NE. ¾ E	.5	Clear	Tanner subm. net.
541	Jan. 14	5.17 p. m.	35 25 30	125 09 30	59	57		Surface and 300 fath.	do	NNE	1	NE. ¾ E	.5	do	Tanner submarine net and surface tow net.
542	Jan. 14	7.19 p. m.	35 31 00	124 57 30	57	56		Surface	do	NNE	2	NE. ¾ E	.5	Moonlight	Surface tow net.
543	Jan. 14	9.28 p. m.	35 36 30	124 45 30	56	56		do	do	NNN	2	NE. ¾ E	.5	do	Do.

[a] Serial numbers indicate cable survey numbers of stations, where Tanner submarine and surfce tow nets were used. Numbers same as regular hydrographic series from No. 2655 to 3202.

Record of surface tow-net stations of the Albatross, 1893.

[Bering Sea—except 3478, California coast.]

Dredging No.	Date.	Time.	Position.		Temperature.			Depth.	Character of bottom.	Wind.		Drift.	
			Lat. N.	Long. W.	Air.	Surface.	Bottom.			Direction.	Force.	Direction.	Force.
	1893.		° ′ ″	° ′ ″	°F.	°F.	°F.	Fms.					
3478	Apr. 26	11.24 a. m.	36 44 45	120 57 00	56	53	.....	68	gy. s. m	SW	2	.....	.....
3500	July 17	11.53 a. m.	56 02 00	169 30 00	49	46	38.6	121	fne. gy. s. g	South	3	SE. by S	0.7
3501	July 17	2.16 p. m.	55 51 00	169 18 00	50	47	36.9	688	gn. m	South	3	SE. ⅝ E	4.0
3502	July 17	6.55 p. m.	55 38 00	169 00 00	49	46	.....	368	gn. m. dk. s	SSW	3	SE. ⅝ E	0.5
3507	July 29	1.00 p. m.	57 43 00	164 42 00	50	43	37.5	31	fne. gy. s	NNW	2	NNW. ½ W	0.8
3508	July 29	7.33 p. m.	58 33 00	164 49 00	43	41	42	23	fne. gy. s. sh	NW	2	W. ½ S	1.0
3517	Aug. 2	8.01 p. m.	60 27 00	169 04 00	41	41	40.3	24	fne. gy. s	West	4	WSW. ⅝ W	1.0
3518	Aug. 3	6.40 a. m.	60 22 00	171 42 00	41	42	33.9	36	gn. m	West	3	SSE. ½ E	1.0
3519	Aug. 3	10.03 a. m.	60 06 00	171 25 00	43	42	31.1	37	bk. m. fne. s	SSE	2	ESE	0.5
3520	Aug. 3	4.10 p. m.	59 28 00	170 57 00	43	43	32.2	38	gn. m. fne. s	SE	3	E. by S	0.7
3521	Aug. 3	7.35 p. m.	59 09 00	170 48 00	43	43	31.9	40	gn. m. fne. s	SE	5	ESE	0.5
3522	Aug. 4	9.24 a. m.	57 58 00	170 09 00	46	44	35.7	41	crs. gy. s. g	SW	4	SSE	1.0
3523	Aug. 4	1.18 p. m.	57 39 00	170 02 00	47	45	38	39	gn. m. fne. s	SSW	3	SSE	0.7
3524	Aug. 4	4.08 p. m.	57 24 00	169 56 00	46	45	40.3	36	gy. s. p	SSW	4	SSE	1.3
3527	Aug. 5	10.35 a. m.	57 48 00	171 21 00	48	44	38	52	gn. m	SSW	4	NW. by W	0.8
3530	Aug. 6	7.33 a. m.	59 39 00	173 53 00	45	44	34.9	59	dk. gn. m. fne. s	Calm	0	W. ½ N	0.5
3531	Aug. 6	11.00 a. m.	59 55 00	174 17 00	47	46	35.1	59	gn. m	SE	1	W. ½ S	1.0
3532	Aug. 6	7.40 p. m.	59 12 00	175 39 00	48	44	34.8	77	dk. gn. m. fne. s	N. by E	3	SE	1.2
3537	Aug. 9	6.55 a. m.	54 45 00	169 06 00	45	43	38	49	fne. gy. s	SW	2	E. ½ N	1.0
3538	Aug. 9	10.13 a. m.	56 41 00	168 29 00	48	46	38	59	gn. m. s	West	2	E. ½ N	0.8
3539	Aug. 9	3.49 p. m.	56 34 00	167 19 00	49	45	38.9	57	gn. m. s	SW	3	E. ½ S	0.5
3540	Aug. 9	9.12 p. m.	56 27 00	166 08 00	47	45	36	51	gn. m. fne. s	SSW	3	East	0.6
3541	Aug. 10	5.19 a. m.	56 14 00	164 08 00	48	46	36.1	49	bk. m. fne. s	SSE	3	E. ½ N	0.5
3542	Aug. 10	8.43 a. m.	56 10 00	163 26 00	49	47	39.2	49	dk. m. fne. s	SE	3	SE. by E. ½ E	0.7
3543	Aug. 18	4.17 p. m.	56 41 00	169 39 00	48	44	42.7	43	bk. s. sh	WNW	2	East	1.0
3544	Aug. 18	7.20 p. m.	56 50 00	169 59 00	47	44	41.1	41	fne. gy. s. sh	NW by N	2	WSW	0.5
3545	Aug. 21	5.07 p. m.	56 15 00	171 33 00	52	48	36	1,020	gn. m. fne. s. c	West	5	NNE. ½ E	0.7
3547	Aug. 31	12.38 p. m.	54 16 00	165 45 00	54	47	45	51	fne. bk. s	South	2.3	NNE. ½ E	0.7
3548	Sept. 1	9.03 a. m.	54 44 00	165 42 00	52	47	39.5	91	bk. s	East	3	W. ½ S	1.5
3549	Sept. 1	11.54 a. m.	55 00 00	166 10 00	53	49	40.1	78	fne. bk. s	E. by S	5	WNW	2.0
3550	Sept. 1	4.26 p. m.	55 24 00	167 02 00	51	48	39	76	br. m	NE	5	NNW. ½ W	0.8
3551	Sept. 1	6.56 p. m.	55 36 00	167 28 00	49	47	39.1	74	gn. m	NE	3	N. by W. ½ W	1.2
3553	Sept. 2	7.58 a. m.	56 28 00	169 46 00	48	48	39.5	51	fne. gy. s. m	NNE	3	NNW. ½ W	0.8
3554	Sept. 2	10.33 a. m.	56 34 00	170 19 00	48	47	39.5	62	gn. m	NE. by N	4	N. by W. ½ W	0.7
3555	Sept. 2	12.41 p. m.	56 45 00	170 18 00	47	46	40.2	57	gn. m	NE. by N	4	N. by W. ½ W	1.0
3556	Sept. 2	3.21 p. m.	56 57 30	170 33 00	49	46	41	49	gn. m. fne. s	NE	4	NW. by W	1.5
3559	Sept. 3	9.17 a. m.	56 56 00	169 52 00	47	46	42.5	39	gy. s. brk. sh	NE. by E	4	East	0.8

Record of Tanner intermediate tow-net stations of the Albatross, 1893.

[Condition of sea, smooth.]

Serial No.	Date.	Time.	Position.		Temperature.			Depth (in fathoms).	Wind.		Appearance of sky.	Remarks.
			Lat. N.	Long. W.	Air.	Surface.	Bottom.		Direction.	Force.		
			California coast.									
	1893.		° ′ ″	° ′ ″	°F.	°F.	°F.					
31	Apr. 26	10.11 a. m.	36 48 15	121 59 05	58	54	.....	5 to surface	N	1	Clear	Entire net open.
32	Apr. 27	8.30 a. m.	37 29 00	123 01 20	54	55	41.7	100 to surface	WNW	3	do	All specimens from upper net.
			Bering Sea.									
33	Aug. 3	6.40 a. m.	60 22 00	171 42 00	41	42	33.9	25 to surface	W	3	Cloudy	
33	Aug. 3	6.40 a. m.	60 22 00	171 42 00	41	42	33.9	25 fathoms *a*	W	3	do	Specimens from both nets.
34	Aug. 3	10.03 a. m.	60 06 00	171 25 00	43	42	31.1	25 to surface	SSE	2	do	
34	Aug. 3	10.03 a. m.	60 06 00	171 25 00	43	42	31.1	25 fathoms *a*	SSE	2	do	Do.
35	Aug. 4	9.24 a. m.	57 58 00	170 09 00	46	44	35.7	30 to surface	SW	4	do	
35	Aug. 4	9.24 a. m.	57 58 00	170 09 00	46	44	35.7	30 fathoms *a*	SW	4	do	Do.
36	Aug. 6	7.33 a. m.	59 39 00	173 53 00	45	44	34.9	43 to surface	Calm	0	do	
36	Aug. 6	7.33 a. m.	59 39 00	173 53 00	45	44	34.9	43 fathoms *a*	Calm	0	do	All specimens from upper net.
37	Aug. 6	11.00 a. m.	59 55 00	174 17 00	47	46	35.1	44 to surface	SE	1	do	
37	Aug. 6	11.00 a. m.	59 55 00	174 17 00	47	46	35.1	44 fathoms *a*	SE	1	do	Specimens from both nets.
38	Aug. 9	6.55 a. m.	54 45 00	169 06 00	45	43	38	40 to surface	SW	2	do	
38	Aug. 9	6.55 a. m.	54 45 00	169 06 00	45	43	38	40 fathoms *a*	SW	2	do	Do.
39	Aug. 10	8.43 a. m.	56 10 00	163 26 00	49	47	39.2	30 to surface	SE	3	do	
39	Aug. 10	8.43 a. m.	56 10 00	163 26 00	49	47	39.2	30 fathoms *a*	SE	3	do	Do.
40	Aug. 18	4.17 p. m.	56 41 00	169 39 00	48	44	42.7	30 to surface	WNW	2	Overcast	
40	Aug. 18	4.17 p. m.	56 41 00	169 39 00	48	44	42.7	30 fathoms *a*	WNW	2	do	Do.
41	Aug. 20	4.03 p. m.	54 38 00	175 27 00	56	49	35.1	125 to surface	NNE	3	do	
41	Aug. 20	4.03 p. m.	54 38 00	175 27 00	56	49	35.1	125 fathoms *a*	NNE	3	do	Do.
42	Aug. 21	9.48 a. m.	55 46 00	172 44 00	51	48	35.1	250 to surface	W	5	do	
42	Aug. 21	9.48 a. m.	55 46 00	172 44 00	51	48	35.1	250 fathoms *a*	W	5	do	Do.
43	Aug. 22	1.29 p. m.	54 59 00	171 49 00	49	48	35.1	100 to surface	SE. by S	2	Cloudy	
43	Aug. 22	1.29 p. m.	54 59 00	171 49 00	49	48	35 1	100 fathoms *a*	SE. by S	2	do	Do.
44	Sept. 1	9.03 a. m.	54 44 00	165 42 00	52	47	39.5	50 to surface	E	3	do	
44	Sept. 1	9.03 a. m.	54 44 00	165 42 00	52	47	39.5	50 fathoms *a*	E	3	do	Do.
			Coast of Washington.									
	1894.											
45	Apr. 30	1.08 p. m.	48 14 30	122 58 00	53	46	44	4 to surface	W	1	Clear	Do.

a Lower net closed at this depth by messenger.

Record of Townsend intermediate and surface tow-net stations of the Albatross, 1895.

Serial No.	Date.	Position.		Temperature.		Time of day.	Depth of net.	Length of trial.	Net used.	Result.
		Lat. N.	Long. W.	Surface.	Depth.					
		Bering Sea.								
	1895.	° ′	° ′ ″	° F.			*Fms.*	*Min.*		
46	Aug. 5	55 06	169 08 00	46	38.2	1.17 p.m.	200	26	Intermediate	Abundance small crustaceä, young shrimps, and sagitta.
		55 06	169 08 00			1.17 p.m.	Surface.	26	Surface	2 small fish and abundance of small crustacea.
47	Aug. 7	55 36	170 45 00	44		11.28 a.m.	100	23	Intermediate	Numerous small crustacea and sagitta.
		55 36	170 45 00	44		11.28 a.m.	Surface.	23	Surface	Few small crustacea and sagitta.
48	Aug. 7	55 10	170 56 00	45	38	7.17 p.m.	150	27	Intermediate	Numerous small crustacea and sagitta and 4 small fish.
		55 11	170 56 00	45		7.17 p.m.	Surface.	27	Surface	Abundance of small crustacea and sagitta.
		55 11	171 13 00	45		10.00 p.m.	1	20	do	Abundance of small crustacea and siphonophore.
49	Aug. 8	55 53	171 40 00	45	37.4	10.43 a.m.	200	58	Intermediate	Numerous small crustacea and sagitta.
		55 53	171 40 00	45		11.30 a.m.	10 feet.	16	Surface	Very few crustacea and sagitta.
50	Aug. 8	55 44	171 17 00	44	37.7	5.08 p.m.	100	20	Intermediate	2 small fish, abundance amphipod crustacea.
		55 44	171 17 00	44		5.15 p.m.	20 feet.	20	Surface	10 small fish, few crustacea and fish eggs.
51	Aug.10	56 15	172 35 00			1.40 p.m.	43	23	Intermediate	Abundance small crustacea of several species; numerous sagitta.
		56 15	172 35 00			1.40 p.m.	2	24	Surface	1 very small squid; few larval shells; abundance pelagic refuse.
52	Aug.10	56 13	172 20 00	45		4.27 p.m.	50	21	Intermediate	Minute crustacea of several species; few sagitta.
		56 13	172 20 00	45		4.27 p.m.	Surface.	15	Surface	Quantity of small crustacea.
53	Aug.11	55 23	170 31 00			12.43 p.m.	48	23	Intermediate	1 young gadoid; few medusæ and annelida; 1 embryo octopus; sagitta and crustacea.
		55 23	170 31 00			12.43 p.m.	Surface.	23	Surface	Quantity brownish pelagic refuse.
						2.47 p.m.	Surface.	25	do	Quantity of brownish spicules and pelagic refuse.
				45		10.00 p.m.	Surface.	20	do	Few small red medusæ; 1 large white medusa; many small crustacea and worms.
54	Aug.12	54 54	168 59 00	45	39.5	11.47 a.m.	25	30	Intermediate	Numerous small crustacea and sagitta.
		54 54	168 59 00	45		11.47 a.m.	Surface.	30	Surface	2 small fish; few medusæ, worms, and crustacea.
						9.45 p.m.	Surface.	20	do	Few large brown medusæ; few smaller medusæ; 4 young cod; few small pelagic fishes; many small crustacea, etc.
55	Aug.13					12.53 p.m.	30	25	Intermediate	3 species small medusæ; several species minute crustacea; small cod; small invertebrates.
						12.53 p.m.	Surface.	25	Surface	Abundance brownish algæ and pelagic refuse; few larval squid.
						5.10 p.m.	Surface.	40	do	
56	Aug.18					5.00 p.m.	200	32	Intermediate	Few small medusæ, abundance sagitta, and minute crustacea.
						5.00 p.m.	Surface.	32	Surface	Quantity of larval shells, minute crustacea, and minute brownish algæ.
57	Aug.19	54 17	168 53 30			12.00 m.	50	25	Intermediate	Abundance sagitta and minute crustacea; few larval squid.
		54 17	168 53 30			12.00 m.	Surface.	25	Surface	Small quantity sagitta and minute black crustacea; few small medusæ, larval crabs, and small pelagic fish.
58	Aug.19						575	30	Intermediate	Few sagitta, crimson prawns, small medusæ, larval ophiurans; few ascidians; crustacea.

Record of Townsend intermediate and surface tow-net stations of the Albatross, 1895—Continued.

Serial No.	Date.	Position.		Temperature.		Time of day.	Depth of net.	Length of trial.	Net used.	Result.
		Lat. N.	Long. W.	Surface.	Depth.					
		Bering Sea.								
	1895.	° ′	° ′ ″	°*F.*			*Fms.*	*Min.*		
58	Aug. 19	.....	.....	.....	.....	.....	Surface.	30	Surface	Quantity of larval shells, small crustacea, and medusæ.
59	Aug. 20	.....	.....	.....	.....	9.25 p. m.	Surface.	25	....do	Hauled with electric light.
		.....	.....	.....	.....	12.01 p. m.	200	20	Intermediate	Struck bottom; sagitta and minute pink crustacea; small ophiurans; 3 small fishes; worms.
		.....	.....	.....	.....	12.01 p. m.	Surface.	20	Surface	Few small crustacea.
59	Aug. 20	55 19	168 11 00	.....	.....	9.55 a. m.	Surface.	.....	....do	
		55 11	167 56 00	.....	.....	10.15 p. m.	Surface.	.....	....do	
60	Aug. 20	.....	.....	.....	.....	.....	70	25	Intermediate	Abundance of small crustacea and sagitta.
		.....	.....	.....	.....	.....	Surface.	25	Surface	Similar to above.
		.....	.....	.....	.....	10.35 p. m.	Surface.	20	....do	Many small medusæ and abundance of small crustacea.
61	Aug. 21	.....	.....	.....	.....	9.20 p. m.	50	20	Intermediate	Abundance minute pinkish crustacea of many species.
		.....	.....	.....	.....	9.20 p. m.	Surface.	20	Surface	Small quantity ova and larval squid; many larval crabs; few small pelagic fishes; brown algæ.
62	Aug. 21	.....	.....	.....	.....	.....	30	20	Intermediate	Abundance small crustacea and sagitta.
		.....	.....	.....	.....	.....	Surface.	20	Surface	Few crustacea.
63	Aug. 22	.....	.....	.....	.....	9.18 p. m.	20	25	Intermediate	Few larval Gadidæ and squid; abundance of petropods with shells; few small medusæ.
		.....	.....	.....	.....	9.18 p. m.	Surface.	25	Surface	Usual sagitta and crustacea.

Serial No.	Agassiz serial No.	Date.	Time.	Position and true bearings.		Temperatures.			Depth.	Character of bottom.	Wind.		Remarks.
				Lat. N.	Long. W.	Air.	Surface.	Bottom.			Direction.	Force.	
				San Francisco, Cal., to Nukuhiva Isd., Marquesas Isds.									
		1899.		° ′ ″	° ′ ″	°*F.*	°*F.*	°*F.*	*Fms.*				
Hy. 3778	1	Aug. 26	4.52 a. m.	31 10 00	125 00 00	62	64	.....	1,955	No specimen.	NNW	3	Open intermediate to 300 fms.
Hy. 3778	1	Aug. 26	5.06 a. m.	31 10 00	125 00 00	62	64	.....	1,955	do	NNW	2	Surface 31 minutes.
Dr. 3681	2	Aug. 27	10.15 a. m.	28 23 00	126 57 00	66	66	34.6	2,368	lt. br. vol. oz.	N	3	Surface 30 minutes.
Dr. 3681	2	Aug. 27	3.36 p. m.	28 23 00	126 57 00	67	66	34.6	2,368	lt. br. vol. oz.	NE. by N	2	Open intermediate to 350 fms.
Dr. 3681	2	Aug. 27	4.25 p. m.	28 23 00	126 57 00	67	66	34.6	2,368	lt. br. vol. oz.	NE	2	Open intermediate to 100 fms.
Substation	Substation.	Aug. 27	8.20 p. m.	28 11 00	127 16 00	66	65	.....	(Did not sound.)		NNE	2	Surface 20 minutes.
Substation	3	Aug. 28	3.42 p. m.	26 18 00	128 54 00	69	68	.....	(Did not sound.)		NE	3	Open intermediate to 200 fms.
Hy. 3779	4	Aug. 29	9.41 a. m.	24 45 00	130 16 00	70	68	34.6	2,628	lt. br. vol. oz.	NNE	4	Open intermediate to 500 fms.
Hy. 3779	4	Aug. 29	9.35 a. m.	24 45 00	130 16 00	70	68	34.6	2,628	lt. br. vol. oz.	NNE	5	Surface 25 minutes.
Hy. 3779	4	Aug. 29	10.03 a. m.	24 45 00	130 16 00	71	68	34.6	2,628	lt. br. vol. oz.	NNE	5	Surface 8 minutes.
Hy. 3780	5	Aug. 30	8.30 a. m.	22 42 00	131 54 00	71	70	34.6	2,740	br. vol. oz	N. by E	4	Surface 20 minutes.
Hy. 3780	5	Aug. 30	8.23 a. m.	22 42 00	131 54 00	71	70	34.6	2,740	br. vol. oz	N. by E	4	Open intermediate to 150 fms.
Hy. 3781	6	Aug. 31	9.56 a. m.	20 26 00	133 28 00	75	75	.....	2,810	dk. br. vol. oz.	NE	2	Surface 14 minutes.
Hy. 3781	6	Aug. 31	10.95 a. m.	20 26 00	133 28 00	75	75	.....	2,810	dk. br. vol. oz.	NE	2	Open intermediate to 150 fms.
Hy. 3782	7	Sept. 1	9.26 a. m.	18 19 00	134 57 00	77	76	.....	2,881	dk. br. vol. oz.	NNE	2	Do.
Hy. 3782	7	Sept. 1	9.30 a. m.	18 19 00	134 57 00	78	76	.....	2,881	dk. br. vol. oz.	NNE	1	Surface 15 minutes.
Substation	Substation.	Sept. 1	8.06 p. m.	17 32 00	135 40 00	76	76	.....	(Did not sound.)		NNE	2	Surface 19 minutes.
Hy. 3786	12	Sept. 4	10.05 a. m.	12 07 00	137 18 00	82	81	.....	2,883	lt. br. rad. oz.	NE	4	Open intermediate to 150 fms.
Hy. 3786	12	Sept. 4	10.13 a. m.	12 07 00	137 18 00	82	81	.....	2,883	lt. br. rad. oz.	NE	4	Surface 13 minutes.
Substation	Substation.	Sept. 4	7.55 p. m.	10 57 35	137 35 25	80	80	.....	(Did not sound.)		NE	3	Surface 22 minutes.
Substation	Substation.	Sept. 4	8.48 p. m.	10 57 35	137 35 25	80	80	.....	(Did not sound.)		NE	3	Surface 15 minutes.
Dr. 3683	13	Sept. 5	10 a. m.	9 57 00	137 47 00	83	82	.....	2,690	lt. br. m. rad. oz.	NE	2	Surface 25 minutes.
Dr. 3683	13	Sept. 5	1.30 p. m.	9 57 00	137 47 00	84	82	.....	2,690	lt. br. m. rad. oz.	E	2	Surface 15 minutes.
Substation	Substation.	Sept. 5	8.08 p. m.	9 26 00	137 49 00	82	82	.....	(Did not sound.)		E	2	Surface 21 minutes.
Hy. 3787	14	Sept. 7	10 a. m.	6 41 00	137 00 00	81	82	.....	2,776	lt. gy. glob. oz	E. by S	3	Open intermediate to 150 fms.
Hy. 3787	14	Sept. 7	10.03 a. m.	6 41 00	137 00 00	81	82	.....	2,776	lt. gy. glob. oz	E. by S	3	Surface 15 minutes.
Substation	Substation.	Sept. 7	8.01 p. m.	5 40 00	136 47 00	81	81	.....	(Did not sound.)		SE	3	Surface 20 minutes.
Substation	Substation.	Sept. 7	8.22 p. m.	5 40 00	136 47 00	81	81	.....	(Did not sound.)		SE	3	Elec. light and dip nets 18 min.
Hy. 3788	15	Sept. 8	9.58 a. m.	4 35 00	136 54 00	81	80	.....	2,583	lt. gy. oz. glob. rad.	SE	3	Open intermediate to 150 fms.
Hy. 3788	15	Sept. 8	10 a. m.	4 35 00	136 54 00	81	80	.....	2,583	lt. gy. oz. glob. rad.	SE	3	Surface 15 minutes.
Substation	Substation.	Sept. 8	8.01 p. m.	3 28 00	136 54 00	80	80	.....	(Did not sound.)		E. by S	3	Surface 20 minutes.
Hy. 3789	16	Sept. 9	9.23 a. m.	2 38 00	137 22 00	82	80	35.2	2,440	lt. gy. glob. oz	SE. by E	3	Do.
Hy. 3789	16	Sept. 9	9.28 a. m.	2 38 00	137 22 00	82	80	35.2	2,440	lt. gy. glob. oz	SE. by E	3	Open intermediate to 250 fms.

Record of intermediate and surface tow-net stations of the Albatross, 1899–1900—Continued.

Serial No.	Agassiz serial No.	Date.	Time.	Position and true bearings.		Temperatures.			Depth.	Character of bottom.	Wind.		Remarks.
				Lat. N.	Long. W.	Air.	Surface.	Bottom.			Direction.	Force.	
		1899.		° ′ ″	° ′ ″	°F.	°F.	°F.	Fms.				
Substation	Substation.	Sept. 9	7.20 p. m.	1 45 00	137 36 00	80	79	.....	(Did not sound.)		SE. by E	3	Surface 20 minutes.
Substation	Substation.	Sept. 9	7.35 p. m.	1 45 00	137 36 00	80	79	.....	(Did not sound.)		SE. by E	2	Tanner intermediate to 350 fms.
Dr. 3684	17	Sept. 10	10.45 a. m.	0 50 00 Lat. S.	137 54 00	80	80	.....	2,463	gy. yl. glob. oz	SE	3	Surface 15 minutes.
Hy. 3790	18	Sept. 13	9.38 a. m.	6 25 00	138 59 00	81	80	35	2,475	lt. gy. glob. oz	ESE	5	Surface 20 minutes.
Hy. 3790	18	Sept. 13	9.48 a. m.	6 25 00	138 59 00	81	80	35	2,475	lt. gy. glob. oz	ESE	5	Open intermediate to 400 fms.
Dr. 3685	25	Sept. 14	2.30 p. m.	Haunanu Point, UaHuka Isd.		81	80	38	830	vol. s. glob	E	2	Surface 20 minutes.
Dr. 3685	25	Sept. 14	2.57 p. m.	S. 72° E. (true), dist. 13 m.		81	80	38	830	vol. s. glob	E. by N	2	Surface 18 minutes.
Hy. 3797	26	Sept. 14	9 p. m	Haunanu Point, UaHuka Isd. E., dist. 17 m.		80	80	.....	1,173	gy. vol. oz	E. by N	2	Surface 15 minutes.
Hy. 3797	26	Sept. 14	9.05 p. m.	do		80	80	.....	1,173	gy. vol. oz	E. by N	2	Open intermediate to 300 fms.
Hy. 3798	27	Sept. 15	7.01 a. m.	Cape Martin, Nukuhiva Isd., N. 30° E., dist. 6½ m.		80	80	39.5	687	drab vol. oz. glob.	E	3	Do.
				Nukuhiva, Marquesas Isds., to Tahiti, Society Isds., via NW. Paumotu.									
Hy. 3801	30	Sept. 18	9.28 a. m.	10 29 00	141 52 00	81	81	35	2,456	lt. gy. vol. oz. glob.	SE. by E	3	Surface 20 minutes.
Hy. 3801	30	Sept. 18	9.33 a. m.	10 29 00	141 52 00	81	81	35	2,456	lt. gy. vol. oz. glob.	SE. by E	3	Open intermediate to 300 fms
Dr. 3686	31	Sept. 19	9.42 a. m.	12 20 00	144 15 00	79	79	35	2,700	red. c.	SE. by E	3	Surface 30 minutes.
Substation	Substation.	Sept. 19	6.59 p. m.	12 41 00	144 40 00	78	80	.....	(Did not sound.)		E	2	Surface 21 minutes.
Substation	Substation.	Sept. 19	7.15 p. m.	12 41 00	144 40 00	78	80	.....	(Did not sound.)		E	2	Open intermediate to 300 fms.
Hy. 3802	32	Sept. 20	9.18 a. m.	13 37 00	145 42 00	83	80	35	2,451	red. c. foram.	E	3	Surface 20 minutes.
Hy. 3802	32	Sept. 20	9.26 a. m.	13 37 00	145 42 00	83	80	35	2,451	red. c. foram.	E	3	Open intermediate to 300 fms.
Substation	Substation.	Sept. 24	8.02 p. m.	15 24 30	147 59 40	77	80	.....	(Did not sound.)		SE	2	Surface 24 minutes.
				From Tahiti, Society Isds., through Paumotu Archipelago.									
Dr. 3687	74	Oct. 5	8.40 a. m.	Point Venus, Tahiti Isd., S. 82° E., 4.8 m.		74	79	.....	725	fne. vol. s. yl. m.	ENE	1	Surface 15 minutes.

Substation	Substation	Oct. 5	7.08 p.m.	16 39 00 | 149 11 00	78	79	------	(Did not sound.)		E	3	Surface 20 minutes.
Substation	Substation	Oct. 5	7.19 p.m.	16 39 00 | 149 11 00	78	79	------	(Did not sound.)		E	2	Open intermediate to 350 fms.
Hy. 3860	91	Oct. 14	3.56 p.m.	SW. end Fakarava, NE. 2 m.	87	80	------	602	co. s. pter. oz	ESE	3	Surface 20 minutes.
Hy. 3860	91	Oct. 14	4.12 p.m.	----do----------	87	80	------	602	co. s. pter. oz	ESE	3	Open intermediate to 300 fms.
Dr. 3688	133	Oct. 28	8.15 a.m.	NW. point Marokau, E. 2 m.	80	78	34.5	742	pter. oz. mang.	NE. by E	2	Surface 12 minutes.
Dr. 3688	133	Oct. 28	11.50 a.m.	----do----------	80	79	34.5	742	pter. oz. mang.	ENE	2	Open intermediate to 350 fms.
Dr. 3690	139	Oct. 29	10.28 a.m.	NW. Face, Hao Atoll, E. 2 m.	83	79	37.6	812	co. s	NE	2	Surface 16 minutes.
Dr. 3691	173	Nov. 4	9.15 a.m.	18 55 00 | 146 32 00	78	78	34.8	2,440	vol. m. glob. co. part.	E	2	Surface 21 minutes.
Dr. 3691	173	Nov. 4	12.54 p.m.	18 55 00 | 146 32 00	82	79	34.8	2,440	vol. m. glob. co. part.	E	1	Open intermediate to 100 fms.
Dr. 3691	173	Nov. 4	2.22 p.m.	18 55 00 | 146 32 00	82	80	34.8	2.440	vol. m. glob. co. part.	E	1	Open intermediate to 300 fms.
				From Tahiti, Society Isds., via Leeward, Cook, Niue, Tonga, and Fiji Isds., to Suva, Fiji Isds.								
Substation	Substation	Nov. 16	10.23 a.m.	Huaheine Island, SE. 5 m.	-----	82	------	(Did not sound.)		NW. by N	1	Surface 9 minutes.
Dr. 3692	183	Nov. 24	9.30 a.m.	19 04 00 | 167 41 00	82	80	33.9	2,472	red c. rod. oz	E	1	Surface 25 minutes.
				Through Gilbert and Ellice chains to Jaluit, Marshall Isds.								
		1900.		Lat. N. | Long. E.							
Hy. 3958	196	Jan. 1	11.57 a.m.	Village, south coast Apamama Island, N. ¾ m.	92	88	------	(Did not sound.)		NNW	0-1	Surface 31 minutes.
Hy. 3958	196	Jan. 1	12.07 p.m.	----do----------	92	88	------	(Did not sound.)		NNW	0-1	Open intermediate to 150 fms.
				Through Marshall Islands.								
Hy. 3984	222	Jan. 18	12.41 p.m.	Ent. South Pass, Rongelab, N. 1.5 m.	82	81	39	746	crs. co. s	ENE	2	Do.
Hy. 3984	222	Jan. 18	12.45 p.m.	----do----------	81	81	39	746	crs. co. s	ENE	2	Surface 15 minutes.

Record of surface and intermediate tow-net stations (off Japan), 1900.

Serial No.	Date.	Time.	Position.		Temperatures.			Depth.	Character of bottom.	Remarks.
			Lat. N.	Long. E.	Air.	Surface.	Bottom.			
			Suruga Gulf, Honshu Island, Japan.							
	1900.		° ′ ″	° ′ ″	°F.	°F.	°F.	Fms.		
3705 Dr	May 7	1.10 p. m.	34 49 15	138 34 45	64	64	.....	Did not sound		Open intermediate; 20 minutes at 106 fathoms.
	May 7	1.13 p. m.	Seno Umi, S. 18° W., 5.3 m.		.....	.....	.....	.....	.....	Surface; 28 minutes.
3712 Dr	May 10	4.09 p. m.	35 03 30	138 39 50	65	64	.....	500	.....	Surface; 27 minutes; poor haul.
	May 10	4.17 p. m.	Oze Zaki, S. 72° E., 6⅛ m.		59	65	.....	600	.....	Open intermediate; 19 minutes at 250 fathoms; good haul.
			South coast Honshu Island, Japan.							
3730 Dr	May 16	8.31 a. m.	Omai Zaki Light, N. 17° E., 14.5.		61	64	.....	.....	.....	Surface; 22 minutes.
			East coast Honshu Island, Japan.							
3766 Dr	June 3	3.08 p. m.	36 36 00	143 12 00	70	69	.....	Did not sound		Surface; 22 minutes; excellent haul.
			Shioya Saki Lt., N. 78° W., 108 m.							

MISCELLANEOUS RECORDS.

Record of gill-net stations of the Albatross, 1897.

Serial No.	Date.	Position. Lat. N.	Position. Long. W.	Temperature. Air.	Temperature. Surface.	Temperature. Bottom.	Depth.	Character of bottom.	Nets set. Hours.	Nets set. Number.	Nets set. Kind.
		Santa Catalina Island, California.									
	1897.	° ′ ″	° ′ ″	° F.	° F.	° F.	Fms.				
	Apr. 7	1′ 3″ SE. of Avalon, Dakins Cove.		64	58	------	6–10	rky	11	2	Menhaden.
	Apr. 8	------do		60	58	------	6–10	rky	(?)	2	Do.
		Monterey Bay and vicinity.									
1	Apr. 13	36 45 15	121 53 00	64	55	47.7	68	m. s. bldr	70	2	Cod.
2	Apr. 13	36 39 30	121 53 00	57	56	48.7	39	gy. s. mica	19	2	Salmon.
3	Apr. 14	Off Pacific Grove, Point Pinos.		60	57	------	5	gy. s. rky	13	2	Do.
4	Apr. 16	36 47 00	122 10 00	55	57	42.7	278	gy. m. fne. s	17	1 2	Salmon. Cod.
5	Apr. 17	36 43 00	122 12 00	57	55	37.8	581	gy. m. s	51	1 1	Salmon. Cod
6	Apr. 21	37 00 30	122 20 30	53	50	------	56	gy. m. s	48	1 1	Salmon. Cod.
7	Apr. 24	37 37 30	123 02 00	56	49	49.0	68	s. co. r	20	1 2	Salmon.
		Flattery Bank.									
8	May 14	48 21 30	124 50 15	53	48	45.0	80	gn. m. s	22	1 2	Salmon. Cod.

April 7.—1 anchovy.

April 8.—Barren.

No. 1.—One net badly torn. 8 rockfish (S. paucispinis), 3 badly eaten by sea lice—skin only remaining; average length of 5 not destroyed, 26½ inches; average weight, 8 lbs.; 4 females, all with empty stomachs; 1 male with fish bones. 1 rockfish (S. melanops), 20 inches long, also badly eaten. 1 cultus-cod (badly eaten), 38 inches long. 3 ground sharks (2 badly eaten), 1 with beaks of large octopus in stomach. 3 dogfish.

No. 2.—Barren.

No. 3.—2 rock-bass.

No. 4.—One cod and one salmon net badly torn; 7 black cod, 3 males and 4 females; average length, 28 inches; average weight, 8¼ pounds; 3 stomachs empty; others with fish bones, young shrimps, and medusa. 3 red rockfish; bodies of 2 badly eaten; the other, 19 inches, 3 pounds; male, stomach empty. 1 large flounder; 2 dogfish; 6 crabs; branch of cherry tree with anemone attached (preserved section with anemone.)

No. 5.—Cod net badly torn; 3 black cod; all females; average length, 30⅝ inches; average weight, 11½ pounds; 2 stomachs empty; 1 with small piece fishbone; ova partially developed; 9 Macruri; 8 males, 1 female; average length, 24½ inches; average weight, 2¾ pounds.

No. 6.—Barren. Set from ship.

No. 7.—1 rockfish (S. entomelas); female; 18 inches; 3 pounds; stomach empty. 8 rockfish (S. paucispinis); 1 badly eaten by sea lice and slime eels; eel found in skin; of otner 7, 3 were females and 4 males; average length, 27 inches; average weight, 6½ pounds; stomachs all empty; 2 black cod; 1 chimæra; 1 barndoor skate; 5 small dogfish.

No. 8.—Nets badly torn; 1 ground shark 10⅝ feet long; several dogfish; 1 flounder; 1 black cod.

Record of dip-net trials with electric light.

Date.	Time.	Position.	Length of trial.	State of sea.	Temperature. Air D. B.	Temperature. Sea surface.
		Santa Catalina Island, Cal.				
1897.					° F.	° F.
Apr. 6	8 p. m	Anchorage, Isthmus Cove	1 hour	Smooth	60	56
Apr. 9	8 p. m	------do	------do	------do	70	58
		Monterey Bay and vicinity, Cal.				
Apr. 12	7.30 p. m	Anchorage, Santa Cruz	1½ hours	Smooth	59	54
Apr. 23	8 p. m	Anchorage, Halfmoon Bay	1 hour	Light	55	49

April 6.—Quantity of minute crustacea, medusæ, and marine refuse. One worm.

April 9.—Several annelids. Quantity of minute crustacea and marine refuse.

April 12.—1 small fish.

April 23.—Many young fishes, thought to be anchovies and sand launces; 4 very tiny fishes; 3 young shrimps; many minute crustacea; large crustacean like a centipede; several minute worms.

RECORD OF SERIAL TEMPERATURES.

Record of serial temperatures, 1883.

Date.	Position.						Depth.	Temperature.																								
	Lat. N.			Long. W.				Air.	Surface.	5 fathoms.	10 fathoms.	15 fathoms.	20 fathoms.	25 fathoms.	40 fathoms.	60 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.	1,100 fathoms.	1,200 fathoms.	1,300 fathoms.	1,400 fathoms.	1,600 fathoms.	Bottom.
1883.	°	′	″	°	′	″	*Fms.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*
Apr. 27	35	09	40	75	04	36	92	67	72	75	75	74																				74½
27	35	09	58	74	59	18	69	76	76	76	76	76	76		76	69																
28	35	29	35	74	46	45	531	64	69	69	71	70½	69		65	59																
28	35	31	00	74	45	30	724	66	62									42½	40½	40												
28	35	30	00	74	44	45	890	65	61	61	69	70	69																			
30	36	46	15	74	27	50	670	79	46	45	44	42	42		45	43	52		41		39½	39	39									
May 5	37	31	00	74	52	36	19	48½	47	45½	45½	45½																				45½
5	37	29	40	74	53	00	17	49	47	46½	45½	45½																				45½
7	37	12	22	74	20	04	788	62	54	52½	51½	52½	53		52	50	50½															39
7	37	13	52	74	23	52	600	56½	52½	51½	51½	51½	51½		52	52½																39
21	37	37	50	74	15	30	143	56	54				52½																			
21	37	36	00	74	15	00	179	58	54	52½	53	57	54		51½																	45
21	37	32	00	74	13	20	487	59	52	52½	52	52	52½		53½	53																40
21	37	48	00	74	01	30	377	62	56	55	55	54½	55		54	54	54															
25	40	02	00	70	27	00	239	57	49	48½	48	46	44½		42½	42½	48½															40½
25	39	58	25	70	37	00	198	56	52								48															43
25	39	57	50	70	32	00	209	56	52						49																	41
25	39	42	00	70	47	00	1,168	57	53	52	52	52	51		50½	50½	50	46½	40½	40	39½											38½
26	39	29	00	72	19	40	74	55	50	49	48½	43	39½		46½	43½																47½
26	39	32	30	72	18	35	379	62	49½	49	48½	46½	43½		39½	40½	50	42	41½													41
July 17	39	26	16	70	02	37	1,362	73	71	71	69½	52½	48	44	46		44½	41	40½	39½	40	40	39½	40	39	40					
18	38	52	40	69	24	40	1,735	82	76	74	72	68	65	62½	60					48	48	40	39½		38½		38½	40½	40½	38½	38
18	38	53	00	69	23	30	1,731	79	76	74	73	66	63	62	61																	38
26	38	30	30	69	08	25	2,033	77	76½	77	77	71	66	62½	58																	
27	37	58	30	69	01	20	2,451	78	82					72			53			54												36½
28	38	19	26	68	20	20	2,369	77½	81	81	81	81	81	77	68	60	50½	55	43	40½		40	39	39	39	39					
29	38	35	13	68	16	00	2,226	76	76	75½	75½	76	75½	68	56½																	
30	39	33	00	68	26	45	1,555	74	71		71½				57½																	
31	40	01	50	68	50	30	608	72	72	70	68	55	65	58	44	43½	45	43½	40	40												40
Aug. 30	41	58	00	67	57	45	43	58	58½	58	57	57	56	56																		50
31	42	23	00	66	23	00	141	60	57½	57½																						46
31	42	23	30	66	21	15	115	57	54	53	53	53	49½	53	51½	44	42½															42½
Sept. 1	41	55	30	65	47	10	113	61	57		55	54½	53																			42½
1	41	56	40	65	50	10	102	58	55	55	55	55	54	52½	53	41½																43

	2	41	53	00	65	35	00	858	70	56	56	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	39
	3	41	40	30	65	35	00	855	58	58	----	----	59	54½	48½	----	----	----	----	----	----	----	----	----	----	----	----	----	----	39
	4	41	13	00	66	19	50	75	60	67½	67½	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	45
	20	40	06	50	70	34	15	65	71	67	58	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	50
	20	40	01	50	70	39	20	111	70	68	68	68	69½	69½	61	47	52	----	----	----	----	----	----	----	----	----	----	----	----	49
	21	39	42	50	71	01	20	1,000	75	69	68	68	68	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	39
	21	39	44	30	71	04	00	1,022	70	68	68	67½	67½	67	47½	51	52½	----	----	----	----	----	----	----	----	----	----	----	----	38½
	30	39	29	00	70	58	40	1,342	71½	69½	67	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	30	39	22	20	70	52	20	1,451	70	69	67½	68	68	67	66	56½	65½	53½	47	40½	40	40	39½	39½	38½	39	38½	----	----	37½
Oct.	1	37	56	20	70	57	30	1,917	73	72½	68	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	1	37	40	30	70	37	30	2,221	73	72½	72	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	2	37	12	20	69	39	00	2,949	71	82	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
	3	39	18	30	68	24	00	1,686	61	67	69	68	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	37
Nov.	5	38	44	00	72	38	00	1,209	64	62½	62	61½	61½	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	39
	5	38	48	00	72	40	30	991	60	61	62	62	62	62	62	59	55	53½	43½	40½	40	40	39½	39	----	39	----	----	----	41½
	6	37	34	48	73	03	15	1,542	62	62	62	62	62	62	62½	54	39½	51½	43½	41	39½	39½	39	39	39	38½	----	----	----	37
	9	35	16	00	75	02	30	48	76	78½	77	78	78	77	75	68½	----	----	----	----	----	----	----	----	----	----	----	----	----	66
	9	35	16	20	75	04	00	34	75	77	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	74
	9	35	14	30	75	00	30	102	74	76	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	52
	11	35	44	30	74	28	45	1,066	76	76½	77	77	77	77	77	68½	69	40	45	41	40	40	39	----	----	----	----	----	----	----
	12	36	16	15	74	51	20	40	65	68	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	56

Record of serial temperatures, 1884.

Serial No.	Date.	Position.		Depth.	Temperature.															
		Lat. N.	Long. W.		Air.	Surface.	25 fathoms.	50 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.	1,300 fathoms.	Bottom.
	1884.	° ′ ″	° ′ ″	*Fms.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*	°*F.*
Hyd. 46	Jan. 24	17 51 00	65 08 25	2,423	80	77	77	77	77	60	51									39.1
Hyd. 47	Jan. 24	17 46 30	65 10 25	1,482	78	77	77	78	67			45			40		40			38.8
Hyd. 57	Jan. 25	17 49 06	65 29 00	2,188	77	77	77	77	67	59			43				40			38.8
Hyd. 62	Jan. 25	17 32 40	65 52 20	2,017	77	77	77.5	78	66.3	58.5	48		44				40	40	40	
Hyd. 64	Jan. 26	16 59 00	65 19 20	2,543	76	77	77.5	77	65.3		62.5									
Hyd. 66	Jan. 26	16 28 00	64 42 30	2,192	78	77	77.8	76	65	55	47									39.8
Hyd. 71	Jan. 27	15 44 10	63 42 10	950	76	77	78	77.3	67	54.5										39.8
Hyd. 80	Jan. 28	13 56 35	63 02 00	684	75	77	77	72.5	61											39.5
Hyd. 82	Jan. 28	13 29 00	62 42 40	1,051	80	77					44.5									39.3
Hyd. 83	Jan. 28	13 23 00	62 34 15	1,686	77	78	76	68	61.3	50	45	43		40.5	40	40		39.5		39.5
2119	Jan. 29	11 48 30	62 17 30	1,140	75	77	75	68.5												39.3
Hyd. 116	Feb. 5	14 21 44	63 58 45	1,615	78	77	77.5	72	62											39.3
Hyd. 120	Feb. 6	16 01 00	65 56 20	2,492	76	77	77.5		64.5											39.8
Hyd. 121	Feb. 6	16 36 20	66 41 00	2,501	76	77	77	77	67	55	47.8									39.5
Hyd. 123	Feb. 7	15 49 00	67 36 40	2,616	76	77	77.3	77.3	67	55										
Hyd. 124	Feb. 7	15 02 00	67 13 20	2,747	80	77	77.8	78	66.5	53					40.5	39.8	39.5			
Hyd. 127	Feb. 8	13 25 04	66 25 00	2,844	77	77	77.8	77.8	55.5											
Hyd. 128	Feb. 8	12 54 40	66 11 10	2,768	81	78	77.5		61.3											39.5
Hyd. 133	Feb. 9	11 33 20	66 19 00	553	77	75	70.5	65	58	48.5										40.8
Hyd. 134	Feb. 9	11 18 50	66 24 20	656	79	76	71.8	65	58											40
Hyd. 135	Feb. 9	11 05 00	66 30 00	239	78	76	71	64.5												49.3
Hyd. 139	Feb. 9	11 01 00	67 14 15	605	75	75							40.5							
Hyd. 145	Feb. 10	11 52 00	68 35 46	630	78	76	76	68.5	59.8	49.8										
Hyd. 150	Feb. 18	11 56 00	68 56 00	733	77	76	76	66	63											39.6
Hyd. 151	Feb. 18	11 50 45	68 56 30	738	77	76	75	66												39.6
Hyd. 152	Feb. 18	11 40 25	68 57 30	321	76	75				50										45.2
2126	Feb. 19	13 17 45	70 01 00	1,701	78	77	76	66.5	65.5		47									39.3
Hyd. 162	Feb. 19	13 40 20	70 10 45	2,694	75	76	76	69	62	53	46									39.6
Hyd. 165	Feb. 20	15 55 00	71 03 00	2,209	76	77	76	74	67.5		47									39.6
Hyd. 166	Feb. 20	16 42 00	71 18 30	2,028	76	77			66		54									40.1
Hyd. 170	Feb. 21	17 48 00	72 12 20	2,434	77	77	77.5	77	69		51									
Hyd. 171	Feb. 21	18 01 30	72 23 00	1,929	81	79	77	76	67		51									39.6
Hyd. 172	Feb. 21	18 07 00	72 29 00	1,538	80	79	77.5	77	67		50									39.6
Hyd. 179	Feb. 22	17 36 30	72 56 00	2,423	78	77		77	70.5		51									39.7
Hyd. 180	Feb. 22	17 45 30	73 04 00	2,391	79	77					51.5									
Hyd. 188	Feb. 23	17 51 40	74 36 30	894	75	77														
Hyd. 190	Feb. 23	17 33 30	74 45 00	955	78	77														

Hyd. 197	Feb. 24	18 45 00	74 32 40	1,347	78	77	77.5	76	72	------	61	------	------	------	------	------	------	------	------	------	------
Hyd. 198	Feb. 24	18 50 00	74 12 00	1,537	84	79	78	77	68.5	------	58	------	------	------	------	------	------	------	------	------	------
Hyd. 199	Feb. 24	18 56 00	73 51 00	1,974	80	79	78	77.4	68.2	------	51.5	------	------	------	------	------	------	------	------	------	39.7
Hyd. 205	Feb. 25	19 40 00	74 42 00	1,923	77	77	78	74.6	66.7	------	54	------	------	------	------	------	------	------	------	------	39.7
2127	Feb. 25	19 45 00	75 04 00	1,639	78	77	77.6	76	69	61	54.2	47.5	43.5	40	39	------	39.7	------	------	------	------
Hyd. 206	Feb. 25	19 43 21	75 15 30	1,745	76	77	77	76	71	------	------	------	------	------	------	------	------	------	------	------	39.7
Hyd. 215	Feb. 28	18 54 30	74 16 30	1,486	77	78	78.4	78	74.4	------	51	------	------	------	------	------	------	------	------	------	39.9
Hyd. 216	Feb. 28	18 32 30	75 06 00	870	78	78	------	78.4	------	------	52.4	------	------	------	------	------	------	------	------	------	39.7
Hyd. 217	Feb. 28	18 34 00	74 21 00	1,015	79	78	77.8	77.6	68.7	------	49.7	------	------	------	------	------	------	------	------	------	39.7
Hyd. 346	Mar. 23	9 46 00	76 18 30	255	81	82	------	72.2	62.9	------	------	------	------	------	------	------	------	------	------	------	------
Hyd. 353	Mar. 24	9 44 40	77 56 00	550	79	79	76	72.2	61.1	------	------	------	------	------	------	------	------	------	------	------	41.8
Hyd. 354	Mar. 24	9 47 00	78 09 30	630	79	78	78.7	72.5	61.4	51.6	------	------	------	------	------	------	------	------	------	------	------
Hyd. 355	Mar. 24	9 48 00	78 24 00	1,017	79	79	------	72.1	61.4	52	------	------	------	------	------	------	------	------	------	------	------
Hyd. 363	Mar. 25	9 45 15	79 34 00	370	80	79	------	75	56.5	------	------	------	------	------	------	------	------	------	------	------	------
Hyd. 371	Apr. 3	11 20 00	80 42 10	1,832	80	79	78	74	63.8	51.6	46.6	44.8	40.4	40.5	39.5	39.6	39.5	39.2	------	------	39.3
2151	Apr. 10	15 28 39	80 36 00	653	79	78	78.8	77.8	67.9	55.3	47.8	42.7	41.4	------	------	------	------	------	------	------	40.2
Hyd. 419	Apr. 14	23 48 14	84 06 55	1,356	79	79	78.6	77.9	67.9	57.1	51.4	44.6	------	40.9	40.1	40	------	39.8	------	------	39.7
2172	July 20	38 01 15	73 44 00	568	76	76	58.8	55.4	51	45.1	40.7	40	------	------	------	------	------	------	------	------	38.6
2173	July 21	37 57 00	72 34 00	1,600	70	68	53	51.7	51.7	51.7	39.7	39.7	39.5	38.7	38.7	38.7	38.1	38.1	------	------	37
2175	July 22	39 33 00	72 18 30	452	69	68	50.5	51.3	50.6	44.1	40.6	40.2	------	------	------	------	------	------	------	------	40.7
Hyd. 533	July 23	39 23 45	71 43 00	992	70	69	57	52.8	50.7	44.2	40.7	40.2	40	39.6	38.7	38.7	38.6	------	------	------	38.6
Hyd. 544	Aug. 3	39 55 00	71 07 00	221	71	68	64.3	51.8	51.8	------	------	------	------	------	------	------	------	------	------	------	49.3
Hyd. 545	Aug. 4	39 47 00	70 16 20	784	74	72	61.1	52.6	52.2	45.9	40.9	39.6	39.3	39.2	------	------	------	------	------	------	------
2197	Aug. 6	39 56 30	69 43 30	84	77	74	49.8	52.8	52.3	------	------	------	------	------	------	------	------	------	------	------	52.3
Hyd. 549	Aug. 20	39 34 00	71 34 30	925	75	74	66.2	54.8	51.2	43.8	40.6	40.1	40.6	39.2	38.5	39	------	------	------	------	38.6
Hyd. 552	Aug. 23	39 40 05	69 23 00	1,098	75	74	63.2	55.9	52.5	44.3	40.7	39.3	40.6	39.2	39.1	38.6	------	38.8	------	------	38.3
Hyd. 553	Sept. 7	37 41 00	69 15 16	2,704	79	81	82	79.8	72.7	57.3	44	45.6	40.5	39.6	39.6	39.5	39	38.6	------	------	36.3
2224	Sept. 8	36 16 30	68 21 00	2,574	79	80	79.8	77.1	67.1	64.8	64.6	63.8	52.5	44.9	41	40.2	39.5	39.5	------	------	36.8
2225	Sept. 9	36 05 30	69 51 45	2,512	77	81	78.3	71.9	67.6	64.3	64.8	60	51.1	44.7	41.4	40.2	39.6	39.2	------	------	36.7
2227	Sept. 10	36 55 23	71 55 00	2,109	81	82	82.2	77.1	71.4	65.2	62.8	57.7	52.7	42.5	40.4	39.3	39.2	39.1	------	------	36.8
Hyd. 554	Sept. 11	37 22 53	73 06 30	1,600	78	74	76	63.2	63.8	48	46.3	39.7	39.4	39.3	39.1	38.8	------	38.7	------	------	36.8
Hyd. 556	Sept. 12	39 40 00	73 03 00	474	70	74	61.8	52.9	49.3	43.5	40.4	------	------	------	------	------	------	------	------	------	39.7
Hyd. 557	Sept. 13	39 08 30	72 12 30	851	66	72	------	66.8	53.5	43.1	40.6	39.7	39.2	39.1	38.7	------	------	------	------	------	38.7

Record of serial temperatures, 1885.

Serial No.	Date.	Position.		Depth.	Temperature.													
		Lat. N.	Long. W.		Air.	Surface.	25 fathoms.	50 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.	Bottom.
	1885.	° ′ ″	° ′ ″	*Fathoms.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*
2393	Mar. 13	28 43 00	87 14 30	525	70	64	65.2	64	57.9	-------	45.7	43	-------	-------	-------	-------	-------	-------	41
Hyd. 699	Apr. 1	31 54 45	79 17 00	86	66	69	*a* 69.9	*b* 68.4	*c* 66.3	*d* 63.3	*e* 60.8	-------	-------	-------	-------	-------	-------	-------	60.3
Hyd. 702	Apr. 3	36 30 00	73 14 00	2,340	69	72	-------	-------	-------	*f* 59.6	-------	-------	41.3	-------	-------	-------	-------	-------	36.8
Hyd. 703	Apr. 4	36 45 00	73 28 00	1,646	68	66	-------	-------	-------	*f* 43	-------	-------	39.6	-------	-------	-------	-------	-------	37.2
Hyd. 704	Apr. 4	36 57 30	73 47 00	1,436	61	55	50.8	49.9	52.2	43	-------	39.5	-------	38.4	38.6	52.2	38.1	40.6	37.5
Hyd. 705	Apr. 4	37 01 08	74 10 00	1,208	50	52	50.1	44	51.3	44	-------	39.7	39.3	40.8	-------	-------	-------	-------	38.7
Hyd. 712	Apr. 5	37 04 30	74 32 00	98	43	49	50.3	48.2	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
2542	Aug. 7	40 00 15	70 42 20	129	73	76	59.8	56.3	49.8	-------	-------	-------	-------	-------	-------	-------	-------	-------	47.2
Hyd. 849	Aug. 9	39 49 00	70 42 00	452	71	77	59.5	57	49.8	44	40.5	-------	-------	-------	-------	-------	-------	-------	39.6
Hyd. 854	Aug. 10	39 41 00	71 42 00	378	76	77	62.5	45.8	49	42.1	40.1	-------	-------	-------	-------	-------	-------	-------	39.6
2564	Aug. 11	39 22 00	71 23 30	1,396	79	78	61.6	58.1	51.3	48.8	40.3	40	39.4	39	39.2	38.8	38.5	41.3	37.3
2565	Aug. 28	38 19 20	69 02 30	2,069	72	77	76.8	53.7	53.1	54.2	49.9	40.1	39.4	38.7	39	38.6	38.8	38.6	36.2
2566	Aug. 29	37 23 00	68 08 00	2,620	75	80	81.2	79.2	66.6	64.6	63	59.1	53.7	45.3	40.7	40.2	39.5	39.3	36.4
2571	Sept. 1	40 09 30	67 09 00	1,356	75	72	65.7	60.2	54.8	45.7	41.8	40	39.7	38.8	39.8	-------	-------	-------	37.8
2573	Sept. 2	40 34 18	66 09 00	1,742	11	71	68.3	61	52.8	49.4	42	40.2	39.7	39.1	39.4	38.6	38.8	38.1	37.3
2575	Sept. 3	41 07 00	65 26 30	1,710	64	77	71.2	59.1	52.8	47	41.3	40.2	39.8	39.3	38.7	38.8	38.4	38	37.1
2628	Oct. 21	32 24 00	76 55 30	528	70	77	79.9	77.6	59	48	45.5	40.2	-------	-------	-------	-------	-------	-------	38.5

a 5 fathoms. *b* 10 fathoms. *c* 15 fathoms. *d* 25 fathoms. *e* 50 fathoms. *f* 250 fathoms.

Serial No.	Date.	Position.		Temperature.													
		Lat. N.	Long. W.	Air.	Surface.	25 fathoms.	50 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.	Bottom.	Depth.
	1891.	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	*Fms.*
Hy. 2609	Feb. 23	7 12 30	80 56 00	79	81	67.2	63.2											57.7	127
Dr. 3356	Feb. 23	7 09 30	81 08 00	80	83	68.4	65.9	58.5	52.9	44.9	48.7							40.1	546
Dr. 3357	Feb. 24	6 35 00	81 44 00	80	83	74.4	76		51.8	46.1	43	41						38.5	782
Dr. 3361	Feb. 25	6 10 00	83 06 00	81	82	76.9	59	55.7	50.5	46.8	43.6	41.9	40.2	38.3	38.9	37.5	36.5	36.6	1,471
Dr. 3362	Feb. 26	5 56 00	85 10 30	80	84	71.8		55.8	51.3	46.7		59.3		39.1		37.3	36.8	36.8	1,175
Dr 3364	Feb. 27	5 30 00	86 08 30	79	81	68.9	71.4	54.4	48.8	44.9	42.8	41						38	902
Dr. 3366	Feb. 27	5 30 00	86 45 00	83	84	73.7	58.9	55.8	50.9	45.9	44.7	41.5	40.4	38.8				37	1,067
Dr. 3367	Feb. 28	5 31 30	86 52 30	81	82	72.4	69											57.1	100
Dr. 3372	Mar. 1	4 49 00	86 11 20	85	84	74.4	58.8	55	49.1	44.9	42.5	41						38.8	761
Dr. 3373	Mar. 2	4 02 00	84 58 00	83	82	77.7	60.9	55.9	49.7	44.4	41.9		38.9	38	37.5	37.1	37	36.6	1,877
Dr. 3374	Mar. 3	2 35 00	83 53 00	81	80	74.8	61.1	56.6	51.3	45.8	42.3	40.9	39.4					36.4	1,823
Dr. 3375	Mar. 4	2 34 00	82 29 00	76	77	66.7		58	54.2	46.6	43.8	40.9	39.9	38.9	38	37.6	37.2	36.6	1,201
Hy. 2613	Mar. 5	3 50 00	81 44 20	77	77	69.9	59.9	57.7	50.8	45.6	43.3	40.9	39.7	38.8		37.3		36.5	1,181
Dr. 3381	Mar. 6	4 56 00	80 52 30	78	77	70.9	59.3	55.4	51.5	46.7	42.8	40.5	39.4	38.6	37.7	37.4	36.6	35.8	1,772
Dr. 3382	Mar. 7	6 21 00	81 41 00	77	75	67.7	61.1	55.3	49.9	45.8	42.8	41.1	39.4	38.8	38.1	36.7	36.3	35.8	1,793
Dr. 3383	Mar. 8	7 21 00	79 02 00	75	74	63.2	63.4	56.4	49.1	45.0	43.3	41.3	39.6	39.4	39	37.4	37	36	1,832
Dr. 3387	Mar. 8	7 40 00	79 17 50	77	74	65.8	64											56	127
Dr. 3388	Mar. 9	7 06 00	79 48 00	75	73	64	60.9	56.1	49	45.5	43.4	43.1	39.8	39.2	38.1	37.7	37.2	36.2	1,168
Dr. 3392	Mar. 10	7 05 30	79 40 00	76	73	63		55.9	49.8	45	43.2	40.5	39.7	38.6	39.5	37.3	36.8	36.4	1,270
Hy. 2619	Mar. 11	7 31 00	78 42 30	72	68	65	61.8	61.3	48.9	45.5	42.6	41.1	40.2	38.7	37.8			36.5	1,100
Dr. 3396	Mar. 11	7 32 00	78 36 30	77	70	64.5	62.4	55.9										47.4	259
Hy. 2624	Mar. 23	1 18 00	80 01 00	77	80		59.1	58.1	56.4	45.6	43.1	41.9	41					39	724
Hy. 2626	Mar. 23	1 07 00	79 59 00	79	80	68.9	60.7											57.3	90
Dr. 3398	Mar. 23	1 07 00	80 21 00	84	84	68.8	64.4	59	53.8	45.1	42.9	42	40.3	39.5	38.4	38	37	36	1,573
Dr. 3399	Mar. 24	1 07 00	81 04 00	79	80	72.7	65.7	56.1	50	44.9	43	41.4	40.1	38.9	38	37.6	36.7	36	1,740
Hy. 2627	Mar. 25	0 36 00	82 45 00	80	81	71.4	64.3	56.8	49.2	44.8	42.5	41.9	40.2	38.7	38.2	37.7	37.1	36	1,832
		Lat. S.																	
Hy. 2629	Mar. 26	0 20 00	85 08 00	85	83	69.9	63.7	56.2	50.1	45	42.4	41.8	40.3	39.2	38.6	37.8	36.8	36	1,488
Dr. 3401	Mar. 28	0 59 00	88 58 30	81	82	70.1	63.7	56.6	50	46.1								43.8	395
Dr. 3406	Apr. 3	0 16 00	90 21 30	79	81	73.5	59.9	57.9	53.9	45	42.3							41.3	551
		Lat. N.																	
D r. 3411	Apr. 4	0 54 00	91 09 00	79	82	71.8	67.8	61.5	54	46.8	43	41.3	40.8	39.8	38.9	38.1	37.5	36.2	1,189
Dr. 3414	Apr. 8	10 14 00	96 28 00	81	82	81.9	72.1	59.5	51.8	47.8	44.4	42	40.8	39.6	38.8	38.1	37.3	35.8	2,232

Record of serial temperatures, 1893.

No. of station.	Date.	Depth.	Position.		Temperature.																				
			Lat. N.	Long. W.	Air.	Surface.	Bottom.	5 fathoms.	10 fathoms.	15 fathoms.	20 fathoms.	25 fathoms.	30 fathoms.	40 fathoms.	50 fathoms.	60 fathoms.	70 fathoms.	80 fathoms.	90 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.
	1893.	*Fms.*	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*
Dr. 3482	July 12	42	57 18 00	170 42 00	43	42	38.9	42.1	40.1	.....	39.8	.....	38.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3483	July 12	56	57 18 00	171 18 00	44	42	36.8	44.1	43.6	.....	38.2	.....	37.7	36.8	36.7	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3484	July 12	60	57 18 00	171 54 00	43	44	37.4	44.8	46.8	.....	47.8	.....	47.5	44.6	45.9	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3485	July 12	62	57 18 00	172 34 00	42	44	37.1	45	44.8	.....	38.6	.....	39	36.1	36.1	.....	.....	.....	.....	.....	*110.*	*120.*	*130.*	*140.*
Dr. 3486	July 13	150	57 19 00	173 53 00	43	43	38	45.8	45.6	.....	40.8	.....	39.1	39	37.8	37.6	37.1	36.9	36.8	37	37	37.3	37.5	38
Hy. 3301	July 14	100	56 30 00	172 25 00	46	44	38	45.5	45.2	.....	41.7	.....	41.5	41	38.6	39.1	38	37.9	37.8	.....	.....	.....	.....	.....
Dr. 3494	July 14	65	56 34 00	170 34 00	50	46	38.5	44.6	44.2	.....	39.6	.....	37.9	38	37.7	37.8	.....	.....	.....	.....	*200.*	*300.*	*400.*	*500.*
Hy. 3303	July 17	843	55 24 00	168 34 00	48	45	.....	47	42	.....	.....	39.9	.....	.....	38.1	.....	.....	.....	.....	38.8	38.3	38.4	38	38.5
Hy. 3306	July 18	442	54 42 00	167 39 00	50	48	.....	46.8	45.6	.....	.....	42.4	.....	.....	38.9	.....	.....	.....	.....	38.6	38.2	38.1	38.1	.....
Dr. 3503	July 28	17	57 06 15	170 11 00	54	43	37.9	41.5	42.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3504	July 28	34	56 57 00	169 27 00	54	45	37.8	43.5	36.6	.....	36.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3308	July 28	43	57 03 00	168 52 00	50	45	37.6	45.1	45.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3505	July 28	44	57 09 00	168 17 00	46	44	38.1	45.1	45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3309	July 28	41	57 15 00	167 42 00	45	43	36	42	41.9	.....	34.8	.....	38.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3310	July 29	33	57 21 00	167 05 00	45	42	35	41.9	42.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3311	July 29	38	57 27 00	166 30 00	45	42	34.8	42.8	42.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3506	July 29	36	57 33 00	165 55 00	43	42	32	42.3	42.7	.....	39.2	.....	33.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3312	July 29	35	57 38 00	165 20 00	45	42	35.5	41.5	41.2	37.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3507	July 29	31	57 43 00	164 42 00	50	43	37.5	41	41	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3313	July 29	26	58 13 00	164 47 00	44	42	41.4	41.2	40.7	.....	40.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3508	July 29	23	58 33 00	164 49 00	43	41	42	41.7	42.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3314	July 29	22	58 42 00	165 30 00	43	41	41.8	42	41.5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3315	July 30	21	58 51 00	166 11 00	42	41	41	41	42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3316	July 30	25	58 36 00	166 38 00	42	41	40.1	40.2	40.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3317	July 30	29	58 22 00	167 04 00	44	42	37	41.2	39.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3319	July 30	38	57 52 00	167 54 00	46	43	37.5	43	42.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3320	July 30	36	57 38 00	168 19 00	46	43	36.1	44	43.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3321	July 31	41	57 24 00	168 42 00	46	44	36.8	43.2	43.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3322	July 31	42	57 10 00	169 05 00	46	44	37.3	43.1	42.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3509	July 31	35	57 00 00	169 43 00	46	43	40.8	42	41.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3510	Aug. 1	27	57 12 30	169 51 00	47	43	40.1	43.5	43.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3511	Aug. 1	39	57 32 00	169 38 00	48	44	37.2	43.9	43.9	.....	43.2	.....	36.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3512	Aug. 1	38	57 49 30	169 27 00	49	45	36.6	44	43.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3323	Aug. 1	38	58 08 30	169 14 00	47	45	31.8	43.9	42.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3513	Aug. 1	35	58 27 00	169 01 00	46	43	.....	42.1	41.6	.....	30.9	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3514	Aug. 2	21	59 22 00	168 21 00	40	40	40.8	40.6	40.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hy. 3326	Aug. 2	22	59 41 00	168 06 00	42	41	41.1	41.1	41.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3515	Aug. 2	13	59 59 00	167 53 00	42	42	41.8	42	41.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dr. 3516	Aug. 2	17	60 28 00	168 08 00	43	44	43.2	42.3	43.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

Dr. 3517	Aug. 2	24	60 27 00	169 04 00	41	41	40.3	41.8	41															
Hy. 3347	Aug. 2	27	60 26 00	169 54 00	41	41	35.3	41.3	41.1															
Hy. 3348	Aug. 3	35	60 24 00	170 48 00	42	42	32	42	41.8		31													
Dr. 3518	Aug. 3	36	60 22 00	171 42 00	41	42	33.9	41.7	41.1															
Dr. 3519	Aug. 3	37	60 06 00	171 25 00	43	42	31.1	42	40.8															
Hy. 3349	Aug. 3	38	59 47 00	171 08 00	43	43	31.8	43	42.5		29.8		29.8											
Dr. 3520	Aug. 3	38	59 28 00	170 57 00	43	43	32.2	42.6	39.1															
Dr. 3521	Aug. 3	40	59 09 00	170 48 00	43	43	31.9	43	42.8															
Hy. 3350	Aug. 3	40	58 52 00	170 38 00	45	44	30.8	43.2	42.8															
Hy. 3352	Aug. 4	40	58 15 00	170 18 00	46	44	35.4	43.1	41.1		40		32											
Dr. 3522	Aug. 4	41	57 58 00	170 09 00	46	44	35.7	44	44															
Dr. 3523	Aug. 4	39	57 39 00	170 02 00	47	45	38	44.5	44															
Dr. 3524	Aug. 4	36	57 24 00	169 56 00	46	45	40.3	44	43.5		42.3		37.9											
Dr. 3525	Aug. 4	29	57 21 00	170 05 00	46	45	41.6	43	41.9		41.3													
Hy. 3353	Aug. 5	37	57 24 00	170 24 00	47	43	40.3	43.3	42.9															
Dr. 3526	Aug. 5	49	57 31 00	170 57 00	47	44	38.9	44.2	43.9		43.1		39.1	37.2										
Dr. 3527	Aug. 5	52	57 48 00	171 21 00	48	44	38	45	45															
Hy. 3354	Aug. 5	55	58 04 00	171 41 00	48	45	37.4	44.8	44.4															
Dr. 3528	Aug. 5	55	58 19 30	172 02 00	47	45	35.9	45.6	45.2		44.5		43	35.5	35.2									
Dr. 3529	Aug. 5	56	58 36 00	172 24 00	46	45	36.1	45.2	44.5															
Hy. 3355	Aug. 5	57	58 52 00	172 45 00	46	44	35.3	45.2	44.2															
Hy. 3356	Aug. 6	57	59 09 00	173 09 00	45	43	34.2	43.3	43.2		39		34.9	33.2	33.7									
Hy. 3357	Aug. 6	57	59 24 00	173 31 00	45	43	35.7	44.7	41.8															
Dr. 3530	Aug. 6	59	59 39 00	173 53 00	45	44	34.9	44.3	43															
Dr. 3531	Aug. 6	59	59 55 00	174 17 00	47	46	35.1	43.5	43.4		33.6		34	33.6	33.6									
Hy. 3358	Aug. 6	70	59 33 00	175 00 00	51	46	36.7	44.8	44.4															
Dr. 3532	Aug. 6	77	59 12 00	175 39 00	48	44	34.8	44.6	42.9															
Hy. 3359	Aug. 7	71	58 43 00	176 10 00	44	44	......	45.1	45		45		44.2	34.9	37.1	36.8								
Hy. 3360	Aug. 7	1,744	58 11 00	176 38 00	45	44	35.5	35.9	35															
Hy. 3361	Aug. 7	1,367	58 01 00	175 41 00	48	46	35.2	46.7	45.8															
Hy. 3362	Aug. 7	77	57 41 00	174 05 00	49	47	38	46	45.5		40.1		39	38	38.1	38.1	38							
Dr. 3533	Aug. 7	70	57 34 00	173 33 00	47	46	39.2	45.9	45															
Hy. 3363	Aug. 7	69	57 25 00	172 50 00	47	45	37.8	46.1	45.3															
Hy. 3364	Aug. 8	60	57 08 00	171 38 00	47	45	37.8	44.4	45		45.1		39.6	38.1										
Dr. 3534	Aug. 8	59	57 03 00	171 19 00	47	45	38.1	45.3	46.1															
Dr. 3535	Aug. 8	52	57 02 00	170 46 00	48	45	39	43.4	43.5															
Dr. 3536	Aug. 8	40	57 05 00	170 35 00	48	45	42.4	43.4	42.5		42.2		41.9											
Hy. 3365	Aug. 9	37	56 49 00	169 42 00	46	44	40.9	44.1	41		40		39.9											
Dr. 3537	Aug. 9	49	54 45 00	169 06 00	45	43	38	45.6	45.2															
Dr. 3538	Aug. 9	59	56 41 00	168 29 00	48	46	38	45.5	46.1															
Hy. 3366	Aug. 9	59	56 37 00	167 55 00	49	46	38	45.9	45.4		38.8		36.5	37.2	37									
Dr. 3539	Aug. 9	57	56 34 00	167 19 00	49	45	38.9	46.2	46.7															
Hy. 3367	Aug. 9	55	56 31 00	166 43 00	48	46	37.5	46.5	46.6															
Dr. 3540	Aug. 9	51	56 27 00	166 08 00	47	45	36	46.4	46		34.1		34.1	34.2										
Dr. 3541	Aug. 10	49	56 14 00	164 08 00	48	46	36.1	46.9	47.2		35.4		34.9	35.2										
Dr. 3542	Aug. 10	49	56 10 00	163 26 00	49	47	39.2	47	47															
Hy. 3385	Aug. 18	1,036	55 50 00	169 24 00	48	47	36	47.7	48.2															
Dr. 3543	Aug. 18	43	56 41 00	169 39 00	48	44	42.7	42	41.9		41.3		41	41										
Dr. 3544	Aug. 18	41	56 50 00	169 59 00	47	44	41.1	44.6	43															
Hy. 3392	Aug. 19	76	56 39 00	172 21 00	47	45	38.9	46	46	46.6	42.4		39.1	38.4	38	38.4								

Record of serial temperatures, 1893—Continued.

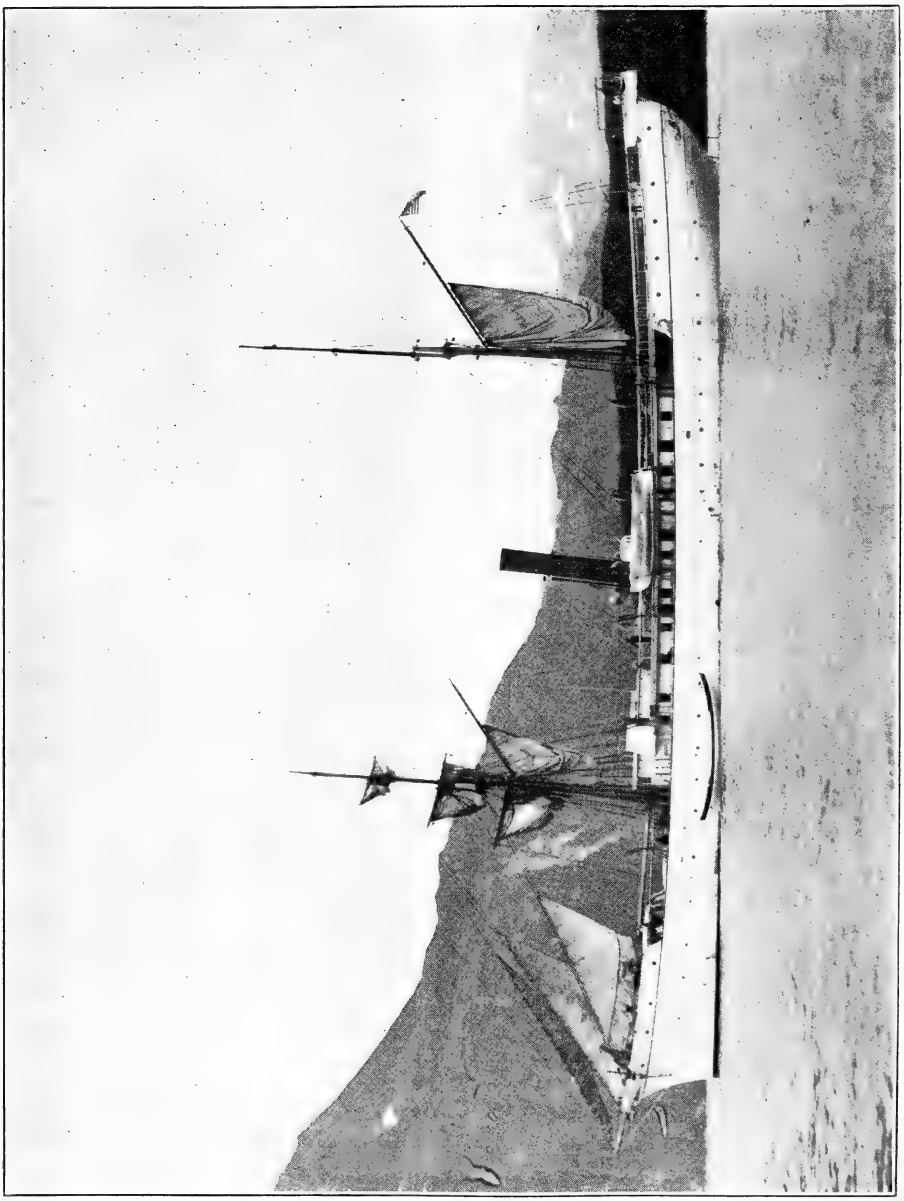
No. of station.	Date.	Depth.	Position.		Temperature.																						
			Lat. N.	Long. W.	Air.	Surface.	Bottom.	5 fathoms.	10 fathoms.	15 fathoms.	20 fathoms.	25 fathoms.	30 fathoms.	40 fathoms.	50 fathoms.	60 fathoms.	100 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.
	1893.	*Fms.*	° ′ ″	° ′ ″	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*
Hy. 3399	Aug. 20	2,041	54 38 00	175 27 00	56	49	35.1	47.8	47	-----	-----	47	-----	-----	37	-----	36.3	39	44.1	38.2	37.4	37.9	36.9	36.3	-----	35.7
Hy. 3402	Aug. 21	1,833	55 46 00	172 44 00	51	48	35.1	-----	-----	-----	-----	39.4	-----	-----	38.3	-----	37	39	38.1	38.2	37.8	38	37.2	36.4	36.2	38.9
Dr. 3558	Sept. 3	25	56 58 00	170 09 00	46	45	42	45.3	45.2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dr. 3559	Sept. 3	39	56 56 00	169 52 00	47	46	42.5	45	45	-----	41.1	-----	41	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3431	Sept. 3	43	56 48 00	169 26 00	47	45	39	46	45.3	-----	42.6	-----	37	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	1894.																									
Dr. 3600	June 26	9	55 06 00	163 28 00	43	41	40.0	40.0	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Record of serial temperatures, 1895.

No. of station.	Date.	Position.		Depth.	Temperature.																			
		Lat. N.	Long. W.		Air, D. B.	Surface.	Bottom.	5 feet.	5 fathoms.	10 fathoms.	25 fathoms.	30 fathoms.	50 fathoms.	100 fathoms.	150 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.
	1895.	° ′ ″	° ′ ″	*Fms.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*
Hy. 3589	Aug. 4	54 00 30	169 20 30	1,003		45	35.5	46	45.3	45													
Hy. 3590	Aug. 5	54 30 00	169 31 00	1,491		44	45	35.5	45	44.8	44.5													
Hy. 3591	Aug. 5	54 59 00	169 41 00	1,676		46	45	35	45	45	42.8													
Dr. 3601	Aug. 5	55 06 00	169 08 00	1,044		46	46	35.8	46	45.5	44.3	40.1		38.1	37.1		38.2		37.5	37.6	37.1	36.2	36.7	35.7
Hy. 3592	Aug. 5	55 12 00	168 47 00	1,035		46	44	35.2	45	44.5	43.8													
Hy. 3593	Aug. 6	55 34 00	169 22 00	1,315		46	45	34.7	45	44.8	44													
Int. 47	Aug. 7	55 36 00	170 45 00			45	44		44	44	43.3				37.4									
Hy. 3594	Aug. 7	55 10 00	170 56 00	1,664		45	44	34.7	45	45	43.8	37.8		37.2	37.1		38.6	38.1	38.3	37.8	37.1	36.7	35.9	36.7	35.5
Hy. 3595	Aug. 8	55 12 00	171 48 00	1,819		44	45	35.2	45	45	43.8													
Hy. 3596	Aug. 8	55 32 00	172 17 00	1,901		43	43	35.5	45	44.5	43.8													
Int. 49	Aug. 8	55 53 00	171 40 00			44	45		45	44.3	44						37.4							
Int. 50	Aug. 8	55 44 00	171 17 00			44	45		45	44.5	43.8				37.7									
Hy. 3597	Aug. 10	56 15 00	172 35 00	1,267		46	45	36	45	45	44.3	41.4		37	36.2		38.2	37.6	38	36.8	36.7		36.1	35.8	36
Int. 52	Aug. 10	56 13 00	172 20 00			46	45		45	44.5	43.8													
Hy. 3598	Aug. 10	56 28 00	172 39 00	296		45	44	38.1	45	44	43.3													
Hy. 3599	Aug. 10	56 29 00	172 39 00	200		45	45	38.1	45	44	43.3													
Hy. 3600	Aug. 10	56 30 00	172 40 00	156		45	45	37.1	45	43.8	43.5													
Hy. 3601	Aug. 10	56 31 00	172 40 00	110		45	44	37.1	45	44	43.3													
Dr. 3602	Aug. 10	56 32 00	172 40 00	81		45	44	37.1	45	43.8	43.5													
Dr. 3603	Aug. 11	55 23 00	170 31 00	1,771		46	45	35.1	45	44.3	44	38.1		38.4	36		38.3	38.4	38.1	37.5	37.2	35.9	36.1	35.6	35.3
	Aug. 11	55 10 00	170 25 00			45	45		44	43.8	44.5													
	Aug. 11	54 56 00	170 16 00			46	45		45	44	43.8													
Hy. 3603	Aug. 12	54 39 00	170 19 00	1,025		46	44	35.3	45	44	43.3													
Hy. 3604	Aug. 12	54 46 00	169 29 00	1,355		45	45	35.2	45	44.8	44													
Dr. 3604	Aug. 12	54 54 00	168 59 00	1,401		46	45	35.2	45	45	43.8	39.5		37.2	38		38.2	37.6	38.3	37.1	37	36.3	36.2	35.5	35.6
Hy. 3605	Aug. 12	55 01 00	168 33 00	1,162		44	45	35.1	45	45	44													
Hy. 3606	Aug. 13	54 54 00	168 13 00	1,132		44	44	35.5	45	44	43.8													
Hy. 3607	Aug. 13	54 41 00	168 01 00	823		44	45	37.1	45	44	43.8													
Hy. 3608	Aug. 13	54 41 00	168 25 00	1,122		44	45	35.3	45	44	43.8													
Hy. 3609	Aug. 13	55 09 00	167 40 00	189		45	45	37.5	45	44	43.8													
Dr. 3605	Aug. 13	55 17 00	167 34 00	91		45	44	37.1	45	44	43.3		41.4											
Dr. 3606	Aug. 13	55 27 00	167 47 00	87		46	45	38.1	45	43.5	42.8													
Hy. 3611	Aug. 13	55 32 00	168 11 00	83		45	45	38.9	44	43.8	43													
Hy. 3612	Aug. 13	55 42 00	168 32 00	76		45	45	38.3	45	43.8	44													
Hy. 3613	Aug. 18	54 14 00	166 54 30	778		52	46	36.3	45	44	43.3													
Hy. 3614	Aug. 18	54 25 00	167 13 00	334		50	46	38.1	45	44.8	44													
Dr. 3607	Aug. 18	54 11 30	167 25 00	987		46	45	35.9	45	44.3	43.5	40.1		40	38.9		37.3	38.1	38.1	38.1	37.4	36.4	36.1	36
Hy. 3615	Aug. 18	54 25 00	167 38 00	486		45	46	37.1	45	44.3	44													
Hy. 3616	Aug. 19	54 11 30	167 50 00	1,048		44	42	35.2	44	43.3	42													
Hy. 3617	Aug. 19	54 24 00	168 02 00	538		44	42	37.1	44	43	41.8													

Record of serial temperatures, 1895—Continued.

No. of station.	Date.	Position.		Depth.	Temperature.																			
		Lat. N.	Long. W.		Air, D. B.	Surface.	Bottom.	5 feet.	5 fathoms.	10 fathoms.	25 fathoms.	30 fathoms.	50 fathoms.	100 fathoms.	150 fathoms.	200 fathoms.	300 fathoms.	400 fathoms.	500 fathoms.	600 fathoms.	700 fathoms.	800 fathoms.	900 fathoms.	1,000 fathoms.
	1895.	° ′ ″	° ′ ″	*Fms.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*	° *F.*
Hy. 3618	Aug. 19	54 10 00	168 14 00	1,075	44	42	35.5	42	42.3	41.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3619	Aug. 19	54 06 00	168 37 00	1,231	45	43	35.3	43	42.8	42.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3620	Aug. 19	54 17 00	168 53 30	1,014	45	43	35.6	44	44	43.3	43.6	-----	37.5	37.3	-----	38.2	38.1	38.2	38.4	36.7	36.8	35.8	36.3	35.6
Hy. 3621	Aug. 19	54 39 00	168 52 30	975	47	44	35.5	45	44	43.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3622	Aug. 19	54 53 00	169 19 00	1,471	46	45	35.1	45	43.8	44	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3623	Aug. 20	55 11 00	168 30 30	944	47	45	35.9	45	43.8	44	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3624	Aug. 20	55 32 00	168 36 00	273	48	47	38.1	45	43.8	43.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3625	Aug. 20	55 19 30	168 09 00	229	46	45	38.1	45	44.3	44.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3626	Aug. 20	55 19 30	168 10 00	244	46	45	38.1	45	43.8	43	38.8	-----	39.6	37.7	37.6	37.7	-----	-----	-----	-----	-----	-----	-----	-----
Dr. 3608	Aug. 20	55 19 00	168 11 00	276	46	45	37.8	44	43	42.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3627	Aug. 20	55 17 00	168 01 00	219	46	45	38	45	44.5	43.8	39.3	-----	38.2	38	37.5	37.9	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3629	Aug. 20	55 11 00	167 56 00	367	46	45	37.8	45	44	43.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3630	Aug. 21	55 04 00	167 24 00	99	47	45	37.6	45	44	43.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3631	Aug. 21	55 19 00	167 27 00	78	47	47	36.5	45	43.8	44	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3632	Aug. 21	55 30 00	167 51 00	74	46	46	37.6	46	44.8	43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dr. 3609	Aug. 21	55 35 00	168 20 00	74	46	46	37.9	46	45	43.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3633	Aug. 21	55 41 00	168 34 00	77	46	46	37.8	46	45	43.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3634	Aug. 21	55 43 00	168 42 00	89	46	45	38.4	46	45	43.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3635	Aug. 21	55 44 00	168 47 00	141	46	45	37.8	45	44	42.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3636	Aug. 21	55 43 00	168 44 00	108	47	45	38	45	44	43.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3637	Aug. 21	55 27 00	168 01 30	104	47	46	36.8	45	45	43.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3638	Aug. 22	55 42 00	166 09 00	68	47	46	37.5	46	45	44.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dr. 3610	Aug. 22	55 58 00	167 16 00	75	45	47	36.8	46	45	43.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dr. 3611	Aug. 22	56 45 00	167 25 00	50	45	46	34.6	46	45	43.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3640	Aug. 24	56 02 00	169 06 30	77	47	45	37.9	45	44.5	44	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3641	Aug. 24	54 57 30	167 14 00	137	48	47	37.7	47	45.8	43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3642	Aug. 24	54 56 00	167 02 30	116	47	46	37.3	46	44.8	44	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3643	Aug. 24	54 55 30	166 57 30	113	46	46	37.3	46	43.8	43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3644	Aug. 24	54 57 00	166 53 00	93	46	46	37.8	46	45	43.3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3645	Aug. 24	54 52 00	166 43 30	113	46	46	37.5	45	43.8	43	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3649	Aug. 25	54 41 00	166 15 30	171	47	45	37.7	45	43.8	43.5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3650	Aug. 25	54 32 00	166 09 00	264	47	45	37.8	45	44	43.8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
	1896.																							
Hy. 3652	Apr. 13	33 06 00	119 17 00	892	58	56	39.1	54.6	56	56	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dr. 3627	Apr. 13	32 44 00	119 32 00	776	55	55	39.2	55	55	54.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3653	Apr. 13	32 38 00	119 36 00	180	55	55	45.4	54	55	54.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3654	Apr. 13	32 30 00	119 43 00	659	55	55	38.6	54	55	54.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hy. 3655	Apr. 13	32 34 00	119 55 00	891	55	55	38.2	54	55	54.6	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



THE ALBATROSS.

CHRONOLOGICAL BIBLIOGRAPHY RELATIVE TO THE WORK OF THE ALBATROSS.

1.

1884. GILL, THEODORE. Diagnoses of new genera and species of deep-sea fish-like vertebrates.

Proc. U. S. Nat. Mus. 1883, vol. 6, pp. 253–260.

The new genera and species described are as follows: *Histiobranchus*, *Sigmops*, *Hyperchoristus*, *Plectromus*, *Stephanoberyx*, *Caulolepis*, *Bassozetus*, *Petromyzon bairdii*, *Chimœra abbreviata*, *Histiobranchus infernalis*, *Notacanthus analis*, *Sigmops stigmaticus*, *Hyperchoristus tanneri*, *Alepocephalus productus*, *Halosaurus goodei*, *Plectromus suborbitalis*, *Stephanoberyx monœ*, *Caulolepis longidens*, *Bassozetus normalis*, *Onos rufus*.

2.

1884. GILL, THEODORE, and JOHN A. RYDER. Diagnoses of new genera of Nemichthyoid eels.

Proc. U. S. Nat. Mus. 1883, vol. 6, pp. 260–262.

The new genera and species described are as follows: *Serrivomer*, *Spinivomer*, *Labichthys*, *Serrivomer beanii*, *Spinivomer goodei*, *Labichthys carinatus*, *L. elongatus*.

3.

1884. GILL, THEODORE. Deep-sea fishing fishes.

Forest and Stream, vol. 21, Nov. 8, p. 284.

The following genera and species from *Albatross* dredgings are described as new: *Typhlopsaras shufeldti*, *Cryptopsaras couesii*.

3a.

1884. GILL, THEODORE, and JOHN A. RYDER. On the anatomy and relations of the Eurypharyngidæ.

Proc. U. S. Nat. Mus. 1883, vol. 6, pp. 262–273.

Material dredged by the *Albatross*. *Gastrostomus bairdii* described as new genus and species.

4.

1884. TANNER, Z. L., Lieut., U. S. N. Report on the work of the U. S. F. C. steamer *Fish Hawk* for the year ending Dec. 31, 1882, and on the construction of the steamer *Albatross*.

Rep. U. S. F. C. 1882, pp. 3–34, 3 pls.

5.

1884. GILL, THEODORE. The ichthyological peculiarities of the Bassalian Fauna.

Science, vol. 3, No. 68, pp. 620–622, 3 cuts.

Based on *Albatross* dredgings; 28 families noted as founded on deep-sea fishes.

6.

1884. GILL, THEODORE. Three new families of fishes added to the deep-sea fauna in a year.

Am. Nat., vol. 18, p. 433.

Notes on Derichthyidæ and Stephanoberycidæ from *Albatross* dredgings. The third family, Eurypharyngidæ, described previously. The new genera are *Derichthys*, *Acanthochœnus* and *Aleposomus;* new species, *Derichthys serpentinus*, *Acanthochœnus lutkenii*, *Aleposomus copei*.

7.

1885. GILL, THEODORE, and JOHN A. RYDER. On the literature and systematic relations of the Saccopharyngoid fishes.

Proc. U. S. Nat. Mus., 1884, vol. 7, pp. 48–65, 1 pl.

Based in part on *Albatross* collections. Remarks on bibliography, history, relationship, synonymy, etc.

8.

1884. BAIRD, G. W., P. A. Engr., U. S. N. Annual report on the electric lighting of the U. S. steamer *Albatross*, Dec. 31, 1883.

Bull. U. S. F. C. 1884, vol. 4, pp. 153–158, 8 figs.

9.

1884. BAIRD, G. W., P. A. Engr., U. S. N. Report on the working of the boilers and engine of the U. S. F. C. steamer *Albatross*.

Bull. U. S. F. C. 1884, vol. 4, pp. 145–151, 6 figs.

10.

1884. SMITH, SIDNEY I. Report on the Decapod Crustacea of the *Albatross* dredgings off the east coast of the United States in 1883.

Rep. U. S. F. C. 1882, vol. 10, pp. 345–426, 10 pls.

The new genera and species here described are as follows: *Ethusina*, *Benthœcetes*, *Parapasiphaë*, *Ethusina abyssicola*, *Galacantha bairdii*, *Pentacheles nanus*, *P. debilis*, *Pontophilus abyssi*, *Acanthephyra eximea*, *Notostomus robustus*, *Pasiphaë princeps*, *Parapasiphaë sulcatifrons*, *P. cristata*, *P. compta*, *Benthesicymus carinatus*, *Amalopenœus valens*, *Aristeus tridens*, *Hepomadus tener*, *Hymenopenœus microps*, *Sergestes mollis*.

11.

1884. VERRILL, A. E. Second catalogue of Mollusca recently added to the fauna of the New England coast and adjacent parts of the Atlantic, consisting mostly of deep-sea species, with notes on others previously recorded.

Trans. Conn. Acad. Arts and Sciences, vol. 6, pp. 139–294, 5 pls.

Based chiefly on *Albatross* dredgings. New genera and species described are as follows: *Leptoteuthis*, *Eledonella*, *Gymnobela*, *Benthodolium*, *Leptoteuthis diaphana*, *Eledonella pygmœa*, *Pleurotomella bairdii*, *P. benedicti*, *P. sandersoni*, *P. saffordi*, *P. diomedeœ*, *P. emertoni*, *P. bruneri*, *P. catharinœ*, *Gymnobela engonia*, *G. curta*, *G. curta subangulata*, *Bela subvitrea*, *B. subturgida*, *Spirotropis ephamilla*, *Typhlomangelia tanneri*, *Marginella borealis*, *Buccinum abyssorum*, *Sipho obesus*, *S. profundicola*, *S. profundicola dispar*, *S. cœlatus hebes*, *S. (Mohnia) cœlatulus*, *S. (Mohnia) simplex*, *S. leptaleus*, *Benthodolium abyssorum*, *Cingula brychia*, *C. syngenes*, *C. leptalea*, *C. apicina*, *Cithna cingulata*, *C. (?) olivacea*, *Seguenzia eritima*, *S. formosa nitida*, *Eulimella lucida*, *E. charissa*, *E. nitida*, *E.* (or *Menestho*) *lissa*, *Odostomia tornata*, *O. disparilis*, *Cyclostrema cingulatum*, *C. affine*, *C. diaphanum*, *Cocculina leptalea*, *Cocculina dalli*, *C. conica*, *Puncturella* (*Fissurisepta*) *eritmeta*, *Propilidium elegans*, *Scaphander nobilis*, *Atlanta pulchella*, *Dentalium solidum*, *Cadulus grandis*, *Thracia nitida*, *Poromya sublevis*, *Necœra undata*, *N. gigantea*, *Yoldia regularis*, *Leda bushiana*, *Pecten leptaleus*, *Octopus carolinensis*, *O. gracilis*, *Bela rathbuni*, *Urosalpinx carolinensis*, *U. macra*, *Sipho hispidulus*, *Cingula sandersoni*, *Rotella cryptospira*, *Ethalia multistriata*, *Taranis morchii tornatus*, *Cyclostrema dalli ornatum*.

11.

1884. VERRILL, A. E.—Continued.

12.

1884. VERRILL, A. E. List of deep-water and surface Mollusca taken off the east coast of the United States by the U. S. F. C. steamers *Fish Hawk* and *Albatross*, 1880–1883.

Ext. Conn. Acad. Sci. Transactions, New Haven. The society. July. vol. 6, pp. 263–290. 8°.

Lists giving bathymetric range.

13.

1885. TANNER, Z. L., Lieut. Commander, U. S. N. Report on the construction and outfit of the U. S. F. C. steamer *Albatross*.

Rep. U. S. F. C. 1883, part 11, pp. 3–116, 55 pls., 20 figs.

Contains chapters on the construction of the vessel, machinery, and appliances, apparatus for deep-sea research, methods of sounding, etc.

14.

1885. TANNER, Z. L., Lieut. Commander, U. S. N. Report on the work of the U. S. F. C. steamer *Albatross* for the year ending December 31, 1883.

Rep. U. S. F. C. 1883, part 11, pp 117–236, 3 pls.

General outline of contents: Investigations of menhaden and mackerel fisheries; records of sounding, dredging, and other operations; list of fishes dredged, etc.; report of naturalist, etc.

15.

1885. SCHROEDER, SEATON, Lieut., U. S. N. Hydrographic work of the *Albatross* in 1884.

Bull. U. S. F. C. 1885, vol. 5, pp. 269, 270.

Chiefly hydrographic notes relating to the West Indies.

16.

1885. VERRILL, A. E. Results of the explorations made by the steamer *Albatross* off the northern coast of the United States in 1883.

Rep. U. S. F. C. 1883, part 11, pp. 503–699, 44 pls.

Contains chapters on character of deep-sea deposits; fauna of deep water; notes on several groups of invertebrates; fauna of northern waters; lists of species dredged, with descriptions of new species; fauna of shallow waters near Cape Hatteras; fauna of surface waters of Gulf Stream, etc. New genera and species described as follows: *Nauphantopsis*, *Pterophysa*, *Angelopsis*, *Ephyroides*, *Synapta brychia*, *Ophiacantha fraterna*, *O. varispina*, *O. gracilis*, *Amphiura fragilis*, *Mangilia ephamilla*, *M. oxytata*, *M. glypta*, *Niso œgleës*, *Dentalium leptum*, *Cadulus carolinensis*, *Neæra costata*, *Atolla verrillii*, *Nauphantopsis diomedeæ*, *Pterophysa grandis*, *Angelopsis globosa*.

17.

1885. VERRILL, A. E. Notice of the remarkable marine fauna occupying the outer banks off the southern coast of New England. No. 11. [Brief contributions to zoology from the museum of Yale College. No. LVII.] Work of the *Albatross* in 1884.

Am. Jour. Sci. 1885, third series, vol. 29, No. 170, Feb., pp. 149–157.

Work of the *Albatross* in 1884. The genus *Benthoptillum* and the following species described as new: *Benthoptillum sertum*, *Desmophyllum nobile V.*, *Hymenaster modestus*, *Archaster sepitus*, *Solaster abyssicola V.*, *Ophiacantha crassidens*, *O. enopla*, *O. granulifera V.*, *O. aculeata*, *Ophiomitra spinea V.*

18.

1885. VERRILL, A. E. Third catalogue of Mollusca recently added to the fauna of the New England coast and the adjacent parts of the Atlantic, consisting mostly of deep-sea species, with notes on others previously recorded.

Trans. Conn. Acad. of Arts and Sciences 1885, vol. 6, pp. 395–452, 3 pls.

Based on *Albatross* dredgings. Contains notes on character of deep-sea deposits and lists giving bathymetric range. The genus *Benthoteuthis*, and the following species are described as new: *Ancistrocheirus megaptera*, *Teleoteuthis* (*Onychia*) *agilis*, *Benthoteuthis megalops*, *Cirrhoteuthis plena*, *C. megaptera*, *Pleurotomella jeffreysii*, *P. tincta*, *P. frielei*, *P. vitrea*, *P. lottœ*, *Gymnobela brevis*, *Bela blakei*, *Admete nodosa*, *Marginella virginiana*, *Trophon abyssorum*, *T. abyssorum limicola*, *Jumala brychia*, *Omalaxis nobilis*, *Delphinula nitida*, *Puncturella abyssicola*, *Cocculina reticulata*, *Turbonilla perlepida*, *T. grandis*, *Actœon hebes*, *Cylichna eburnea*, *Pleurobranchus americanus*, *Dentalium laqueatum*, *Cadulus spectabilis*, *Periploma undulata*, *Pecchiolia granulifera*, *Choristodon* (?) *cancellatus*, *Cryptodon grandis*, *C. plicatus*, *Kelliella nitida*, *Nucula trigona*, *Arca profundicola*, *Limopsis plana*, *L. affinis*, *Crenella fragilis*, *Pecten undatus*.

18.

1885. VERRILL, A. E.—Continued.

gaptera, *Pleurotomella jeffreysii*, *P. tincta*, *P. frielei*, *P. vitrea*, *P. lottœ*, *Gymnobela brevis*, *Bela blakei*, *Admete nodosa*, *Marginella virginiana*, *Trophon abyssorum*, *T. abyssorum limicola*, *Jumala brychia*, *Omalaxis nobilis*, *Delphinula nitida*, *Puncturella abyssicola*, *Cocculina reticulata*, *Turbonilla perlepida*, *T. grandis*, *Actœon hebes*, *Cylichna eburnea*, *Pleurobranchus americanus*, *Dentalium laqueatum*, *Cadulus spectabilis*, *Periploma undulata*, *Pecchiolia granulifera*, *Choristodon* (?) *cancellatus*, *Cryptodon grandis*, *C. plicatus*, *Kelliella nitida*, *Nucula trigona*, *Arca profundicola*, *Limopsis plana*, *L. affinis*, *Crenella fragilis*, *Pecten undatus*.

19.

1885. BUSH, KATHERINE J. Additions to the shallow-water Mollusca of Cape Hatteras, N. C., dredged by the U. S. F. C. steamer *Albatross* in 1883 and 1884.

Trans. Conn. Acad. of Arts and Sciences 1885, vol. 6, pp. 453–480, 1 pl.

The following are described as new: *Mangilia psila*, *M. eritima*, *M. ceroplasta*, *Skenea trilix*, *Scalaria leptalea*, *S. teres*, *Odostomia engonia*, *O. engonia teres*, *Cylichna cœlata*, *Volvula oxytata*, *V. minuta*, *Cadulus incisus*, *Pandora carolinensis*, *Venericardia obliqua*.

20.

1885. SMITH, SIDNEY I. On some new or little-known Decapod Crustacea, from recent Fish Commission dredgings off the east coast of the United States.

Proc. U. S. Nat. Mus. 1884, vol. 7, pp. 493–511.

Descriptions of new genera and species, mostly from *Albatross* dredgings: *Ephyrina*, *Benthonectes*, *Munidopsis crassa*, *M. similis*, *Bythocaris gracilis*, *B. nana*, *Acanthephyra microphthalma*, *A. brevirostris*, *Ephyrina benedicti*, *Benthonectes filipes*.

21.

1885. RIDGWAY, ROBERT. On a collection of birds made by Messrs. J. E. Benedict and W. Nye, of the steamer *Albatross*.

Proc. U. S. Nat. Mus. 1884, vol. 7, pp. 172–180.

Collections from St. Thomas, W. I.; Curaçao, Venezuela; Sabanilla, New Granada; Old Providence, Caribbean Sea. The following species are described as new: *Mimus gilvus rostratus*, *Dendroica rufopileata*, *Icterus curaso-*

21.

1885. RIDGWAY, ROBERT—Continued.
ensis, Zenaida vinaceo-rufa, Certhiola tricolor, Vireosylvia grandior, Vireo approximans, Elainea cinerascens.

22.

1885. RIDGWAY, ROBERT. Descriptions of some new species of birds from Cozumel Island, Yucatan.
Proc. Biol. Soc. Wash., vol. 3, 1884–85.
Preliminary descriptions—see No. 37, Catalogue of Cozumel birds.

23.

1885. RIDGWAY, ROBERT. A new petrel for North America.
The Auk, 1885, vol. 2, pp. 386–387.
A record of the capture on board the *Albatross* of *Pelagodroma marina*.

24.

1885. NYE, Jr., WILLARD. Notes taken during cruise of the *Albatross* to Grand Banks in June and July, 1885.
Bull. U. S. F. C. 1885, vol. 5, p. 336.

25.

1885. NYE, Jr., WILLARD. Notes upon octopus, flying-fish, etc., taken during the *Albatross* cruise in January, 1884.
Bull. U. S. F. C. 1885, vol. 5, pp. 189–190.

26.

1886. BEAN, TARLETON H. Description of a new species of Plectromus (P. crassiceps) taken by the U. S. Fish Commission.
Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 73, 74.
This specimen was dredged by the *Albatross* in 2,949 fathoms.

27.

1886. GOODE, G. BROWN, and TARLETON H. BEAN. Description of Leptophidium cervinum and L. marmoratum, new fishes from deep water off the Atlantic and Gulf coasts.
Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 422–424.

28.

1886. GOODE, G. BROWN, and TARLETON H. BEAN. Descriptions of new fishes obtained by the United States Fish Commission mainly from deep water off the Atlantic and Gulf coasts.

28.

1886. GOODE, G. BROWN, and TARLETON H. BEAN—Continued.
Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 589–605.
New genera and species here described are as follows: *Neobythites, Porogadus, Bathyonus, Aphoristia diomedeana, A. pusilla, Hemirhombus fimbriatus, Citharichthys ventralis, Etropus rimosus, Macrurus caribbæus, M. occa, Coryphænoides sulcatus, Malacocephalus occidentalis, Bathygadus cavernosus, B. macrops, B. longifilis, Neobythites gilli, Porogadus miles, Bathyonus catena, B. pectoralis.*

29.

1886. GOODE, G. BROWN, and TARLETON H. BEAN. Descriptions of thirteen species and two genera of fishes from the *Blake* collection.
Bull. Mus. Comp. Zool., vol. 12, No. 5, pp. 153–170.
Based in part on *Albatross* collections. The new genera and species described are as follows: *Barathronus, Benthosaurus, Aphoristia marginata, A. pigra, Monolene atrimana, Citharichthys dinoceros, Bathygadus arcuatus, B. favosus, Neobythites robustus, N. marginatus, Aphyonus mollis, Barathronus bicolor, Bregmaceros atlanticus, Peristedium longispatha, P. platycephalum, Benthosaurus grallator.*

30.

1886. FEWKES, J. WALTER. Report on the Medusæ collected by the U. S. F. C. steamer *Albatross*, in the region of the Gulf Stream, in 1883–84.
Rep. U. S. F. C. 1884, part 12, pp. 927–980, 10 pls.
A systematic arrangement of the species, with the following genera and species described as new: *Nauphantopsis, Ephyroides, Pterophysa, Angelopsis, Periphylla humilis. Atolla bairdii, A. verrilli, Nauphantopsis diomedeæ, Ephyroides rotaformis, Solmaris incisa, Polycanna americana, Mesonema bairdii, Rhizophysa uvaria, Pterophysa grandis, Angelopsis globosa.*

31.

1886. FEWKES, J. WALTER. On a collection of Medusæ made by the steamer *Albatross* in the Caribbean Sea and Gulf of Mexico.
Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 397–402.
Nine species discussed.

32.

1886. RATHBUN, RICHARD. Report upon the Echini collected by the U. S. F. C. steamer *Albatross* in the Caribbean Sea and Gulf of Mexico, January to May, 1884.

Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 83–89.

A list of 23 species, with brief notes.

33.

1886. RATHBUN, RICHARD. Notice of a collection of Stalked Crinoids made by the steamer *Albatross* in the Gulf of Mexico and Caribbean Sea, 1884 and 1885.

Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 628–635.

Descriptive notes on 4 species.

34.

1886. RATHBUN, RICHARD. Report upon the Echini collected by the U. S. F. C. steamer *Albatross* in the Gulf of Mexico from January to March, 1885.

Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 606–620.

Notice of the cruise, with an account of species obtained: Lists of species obtained in 1884–85 off Atlantic coast, in the Gulf of Mexico and Caribbean Sea.

35.

1886. TANNER, Z. L. Report on the work of the U. S. F. C. steamer *Albatross* for the year ending December 31, 1884.

Report U. S. F. C. 1884, part 12, pp. 3–116, 3 pls.

Outline of contents: Hydrographic and dredging operations in Caribbean Sea; fishery and deep-sea investigations off New England coast; records of dredging and other operations, report of naturalist, etc.

36.

1886. RIDGWAY, ROBERT. Description of a new hawk from Cozumel.

Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 94–95.

Rupornis gracilis described as a new species.

37.

1886. RIDGWAY, ROBERT. Catalogue of a collection of birds made on the island of Cozumel, Yucatan, by the naturalists of the U. S. F. C. steamer *Albatross*, Capt. Z. L. Tanner, commander.

Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 560–583.

An annotated catalogue of 64 species, one (*Centurus rubriventris pygmæus*) described as new. Full descriptions are given of several species, of which brief diagnoses only were given, when first received, in the Proc. Biol. Soc. Wash. 1884–85. These are as follows: *Harporhynchus guttatus*, *Troglodytes beani*, *Dendroica petechia rufivertex*, *Vireo cinereus*, *V. bairdi*, *Cyclorhis insularis*, *Spindalis benedicti*, *Euetheia olivacea intermedia*, *Cardinalis cardinalis saturatus*, *Myiarchus platyrhynchus*, *Empidonax gracilis*, *Attila cozumelæ*, *Lampornis prevosti thalassinus*, *Chlorostilbon forficatus*, *Centurus dubius leei*, *Centurus rubriventris pygmæus*, *Rupornis magnirostris gracilis*.

38.

1886. RIDGWAY, ROBERT. Description of four new species of birds from the Bahama Islands.

The Auk., *1886*, vol. 3, July, pp. 334–337.

New species described from collections made by the *Albatross: Geothlypis coryi*, *G. tanneri*, *Centurus nyeanus*, *C. blakei*.

39.

1886. SMITH, SIDNEY I. On some genera and species of Penæidæ, mostly from recent dredgings of the U. S. Fish Commission.

Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 170–190.

The genus, *Parapenæus*, and the following species here described as new: *Parapenæus megalops*, *P. goodei*, *Hymenopenæus robustus*, *H. modestus*.

40.

1886. SMITH, SIDNEY I. Description of a new crustacean allied to Homarus and Nephrops.

Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 167–170.

Eunephrops bairdii described as new genus and species.

41.

1886. VERRILL, A. E. Notice of recent additions to the Marine Invertebrata of the northeastern coast of America, with descriptions of new genera and species and critical remarks on others. Part V.—Annelida, Echinodermata, Hydroida, Tunicata.

Proc. U. S. Nat. Mus. 1885, vol. 8, pp. 424–448.

The genus *Ophioglycera* and the following new species described: *Polynoë aurantiaca*, *Leanira robusta*, *Amphinome lepadis*, *Leodice benedicti*, *Notophyllum americanum*, *Anaitis formosa*, *A. picta*, *Castalia cincinnata*, *Polydora tubifex*, *Syllis spongiphila*, *Ophioglycera gigantea*, *Ammochares artifex*, *Leprœa abyssicola*, *Sabella picta*, *Synapta brychia*, *Ophiacantha fraterna*, *O. varispina*, *O. gracilis*, *Amphiura fragilis*, *Cladocarpus flexilis*, *Culeolus tanneri*.

42.

1886. WASHBURN, F. L. Deep-sea dredging on the U. S. S. *Albatross*.

Trans. Am. Fish. Soc., pp. 17–21.

A brief description of the ship and the methods of deep-sea exploration.

43.

1887. BENEDICT, JAMES E. Descriptions of 10 species and a new genus of Annelids from the dredgings of the steamer *Albatross*.

Proc. U. S. Nat. Mus. 1886, vol. 9, pp. 547–553, 6 pls.

The genus *Crucigera* and the following species described: *Protula diomedeæ*, *P. alba*, *Hydroides spongicola*, *H. protulicola*, *Crucigera websteri*.

44.

1887. COLLINS, Capt. J. W. Report on the discovery and investigation of fishing grounds made by the *Albatross* during a cruise along the Atlantic coast and in the Gulf of Mexico, with notes on the Gulf fisheries.

Rep. U. S. F. C. 1885, part 13, pp. 217–311, 10 pls.

Contains chapters on shore and bank fisheries, sponge, turtle, red-snapper, and other fisheries, statistics, etc.

45.

1887. TANNER, Z. L. Report on the work of the U. S. F. C. steamer *Albatross* for the year ending December 31, 1885.

Rep. U. S. F. C. 1885, part 13, pp. 3–89, 5 pls., 9 figs.

Outline of contents: Fishery, hydrographic and deep-sea investigations off South Atlantic coast, in Gulf of Mexico, and off New England coast; notes on results of dredge hauls; tabular records of dredging and other operations; report of naturalist, etc.

46.

1887. TANNER, Z. L. Record of hydrographic soundings and dredging stations occupied by the steamer *Albatross* in 1886.

Bull. U. S. F. C. 1886, vol. 6, pp. 277–285.

47.

1887. SMITH, SIDNEY I. Report on the Decapod Crustacea of the *Albatross* dredgings off the east coast of the United States during the summer and autumn of 1884.

Rep. U. S. F. C. 1885, part 13, pp. 605–705, 20 pls.

Contains notes on bathymetrical distribution, character of eyes, number of eggs, etc.; systematic arrangement of species; the following described as new: *Notastomus vescus*, *Hymenodora gracilis*, *Benthesicymus moratus*.

48.

1887. COLLINS, J. W. Notes on an investigation of the great fishing banks of the western Atlantic.

Bull. U. S. F. C. 1886, vol. 6, pp. 369–381.

Notes by the writer as fishery expert on board the *Albatross* in June and July, 1885.

49.

1888. COPE, E. D. List of Batrachia and Reptilia of the Bahama Islands.

Proc. U. S. Nat. Mus. 1887, vol. 10, pp. 436–439.

Based partly on *Albatross* collections; *Liocephalus loxogrammus* described as a new species.

50.

1888. FEWKES, J. WALTER. Are there deep-sea Medusæ?

Amer. Jour. Sci., 1888, third series, vol. 35, No. 206, Feb., pp. 166–179.

The writer states that "our present information is insufficient to answer the question."

51.

1888. RIDGWAY, ROBERT. Description of a new form of *Spindalis* from the Bahamas.

Proc. U. S. Nat. Mus. 1887, vol. 10, p. 3.

Spindalis zena townsendi, from *Albatross* collections, described as a new subspecies.

52.

1889. TANNER, Z. L. Report on the work of the U. S. F. C. steamer *Albatross* for the year ending Dec. 31, 1886.

Rep. U. S. F. C. 1886, part 14, pp. 605–692, 10 pls.

Outline of contents: Investigations respecting mackerel, menhaden, bluefish, etc.; hydrographic, dredging, and fishery work among Bahama Islands and off New England coast; notes on results of dredge hauls; report of naturalist; list of fishes and birds taken among the Bahamas; tabular records of dredging and other operations.

53.

1889. TANNER, Z. L. Report of the movements and operations of the U. S. F. C. steamer *Albatross* from Sept. 15 to 20, 1887.

Bull. U. S. F. C. 1887, vol. 7, pp. 155–158.

54.

1889. DALL, WILLIAM HEALEY. A preliminary catalogue of the Shell-bearing Marine Mollusks and Brachiopods of the southeastern coast of the United States, with illustrations of many of the species.

Bull. U. S. Nat. Mus., No. 37, 221 pp., 74 pls.

Contains bibliography, lists in tabular form showing range in depth, etc.; much of the data due to explorations of the *Albatross*.

55.

1889. FEWKES, J. WALTER. Report on the Medusæ collected by the U. S. F. C. steamer *Albatross* in the region of the Gulf Stream in 1885–86.

Rep. U. S. F. C. 1886, part 14, pp. 513–536, 1 pl.

A systematic arrangement of species with *Pleurophysa insignis* described as new genus and species.

56.

1889. RIDGWAY, ROBERT. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. Birds collected on the island of Santa Lucia, West Indies: Abrolhos Islands, Brazil; and at Straits of Magellan in 1887–88.

Proc. U. S. Nat. Mus. 1889, vol. 12, pp. 129–139.

Geositta longipennis and *Upucerthia propinqua*, from Straits of Magellan, are described as new.

57.

1889. RIDGWAY, ROBERT. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. Birds collected in Galapagos Islands in 1888.

Proc. U. S. Nat. Mus. 1889, vol. 12, pp. 101–128.

Contains lists of species known to the different islands of the archipelago. The following are described as new: *Nesomimus macdonaldi*, *N. personatus*, *Certhidea cinerascens*, *Geospiza conirostris*, *G. media*, *Cactornis brevirostris*, *C. hypoleuca*, *Camarhyncus townsendi*, *C. pauper*, *Pœcilonetta galapagensis*.

58.

1889. SMITH, SANDERSON. Lists of the dredging stations of the U. S. Fish Commission, the U. S. Coast Survey, and the British steamer *Challenger*, in North American waters, from 1867 to 1887, together with those of the principal European government expeditions in the Atlantic and Arctic oceans.

Rep. U. S. F. C. 1886, part 14, pp. 871–1017, 5 chts.

58.

1889. SMITH, SANDERSON—Continued

Lists of dredging stations of U. S. F. C. steamers *Fish Hawk* and *Albatross*; vessels of U. S. Coast Survey; *Challenger*, *Travailleur*, *Talisman*, *Washington*; Swedish expeditions; Danish expeditions; *Lightning*, *Porcupine*, *Shearwater*, *Valorous*, *Knight Errant*, *Triton*, *Josephine*, etc.; list of the deep-water dredgings north of the Bahamas, serial temperatures, etc.

58*a*.

1889. GOODE, G. BROWN. The depths of the ocean.

Atlantic Monthly, *Jan.* 7, pp. 124-128.

59.

1890. TANNER, Z. L., et al. Explorations of the fishing grounds of Alaska, Washington Territory, and Oregon, during 1888, by the U. S. F. C. steamer *Albatross*.

Bull. U. S. F. C. 1888, vol. 8, pp. 1-95, 10 pls., 2 chts.

Compiled from the reports of Commander Tanner, C. H. Townsend, and A. B. Alexander, with introduction by Richard Rathbun. Presents in detail the results of hydrographic dredging and fishery investigations throughout the regions named.

60.

1890. BEAN, TARLETON H. Notes on fishes collected at Cozumel, Yucatan, by the U. S. Fish Commission, with descriptions of new species.

Bull. U. S. F. C. 1888, vol. 8, pp. 193-206, 2 pls.

Sixty species collected by the *Albatross* considered—the following described as new: *Xyrichthys ventralis*, *X. infirmus*, *Scarus cuzamilæ*.

61.

1890. BEAN, TARLETON H. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. VIII.—Description of a new cottoid fish from British Columbia.

Proc. U. S. Nat. Mus. 1889, vol. 12, pp. 641, 642.

The genus and species (*Synchirus gilli*) decribed as new.

62.

1890. COPE, E. D. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. III.—Report on the Batrachians and Reptiles collected in 1887-88.

Proc. U. S. Nat. Mus. 1889, vol. 12, pp. 141-147.

Collections from the West Indies, the east coast of Brazil, Argentine Republic, Chile, Panama, the Galapagos Islands, Lower California, and Pacific coast of North America. The following species are described as new: *Zachœnus roseus*, *Paludicola frenata*, *Phyllodactylus leei*, *Tropidurus lemniscatus*.

63.

1890. DALL, WILLIAM HEALEY. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. VII.—Preliminary report on the collection of Mollusca and Brachiopoda obtained in 1887-88.

Proc. U. S. Nat. Mus. 1889, vol. 12, pp. 219-362, 10 pls.

The collections were made during the voyage of the *Albatross* from Norfolk, Va., to San Francisco, Cal., via Straits of Magellan. Mollusks were obtained at 80 dredging stations and 27 anchorages. Contains copious notes, descriptions of the new species, and discussion of the conditions under which deep-sea mollusks exist. New species: *Malletia goniura*, *M. œolata*, *M. agathida*, *M. acinula*, *M. virens*, *Yoldia scapania*, *Leda cestrota*, *L. platessa*, *L. pontonia*, *Nucula callicredemna*, *Cryptodon fuegiensis*, *Callocardia albida*, *Cytherea eucymata*, *Cymatoica occidentalis*, *C. orientalis*, *Verticordia perplicata*, *Cuspidaria monosteira*, *C. chilensis*, *Poromya cymata*, *P. microdonta*, *Dentalium megathyris*, *Cadulus albicomatus*, *Actœon curtulus*, *A. perconicus*, *Scaphander interruptus*, *Leucosyrinx persimilis*, *L. goodei*, *Pleurotoma exulans*, *Calliotectum vernicosum*, *Pleurotomella cingulata*, *P. argeta*, *P. agonia*, *P. suffusa*, *Volutilithes philippiana*, *Conomitra intermedia*, *Mesorhytis costatus*, *Buccinum viridum*, *Chrysodomus amiantus*, *C. griseus*, *C. aphelus*, *C. testudinis*, *Nassa townsendi*, *Columbella permodesta*, *Murex leeanus*, *Scala pompholyx*, *Adeorbis sincera*, *Cocculina pocillum*, *Halistylus columna*, *Calliostoma platinum*, *C. rioensis*, *Turcicula macdonaldi*, *Solariella oxybasis*, *S. actinophora*.

64.

1890. AGASSIZ, ALEXANDER. Notice of Calamocrinus diomedæ, a new Stalked Crinoid from the Galapagos, dredged by the U. S. F. C. steamer *Albatross*, Lieut. Commander Z. L. Tanner, U. S. N., commanding.

Bull. Mus. Comp. Zool., vol, 20, pp. 165-167.

A preliminary account. See detailed account *Calamocrinus diomedæ*, etc., Agassiz, 85.

65.

1890. JORDAN, DAVID STARR. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. IX.—Catalogue of fishes collected at Port Castries, St. Lucia, by the steamer *Albatross*, Nov., 1888.

Proc. U. S. Nat. Mus. 1889, vol. 12, pp. 645-652

Notes, with description of one new species—*Corvula sanctæ-luciæ*.

66.

1890. JORDAN, DAVID STARR, and CHARLES HARVEY BOLLMAN. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. IV.—Descriptions of new species of fishes collected at the Galapagos Islands and along the coast of the United States of Colombia, 1887–88.

Proc. U. S. Nat. Mus. 1889, vol. 12, pp. 149-183.

Four new genera and 31 new species are described: *Xenocys*, *Bollmannia*, *Runula*, *Engyophrys*; *Raja equatorialis*, *Discopyge ommata*, *Urolophus goodei*, *Synodus evermanni*, *S. jenkinsi*, *Ophisoma nitens*, *Ophichthus evionthas*, *O. rugifer*, *Menidia gilberti*, *Stromateus palometa*, *Diplectrum euryplectrum*, *Prionodes stilbostigma*, *Kuhlia arge*, *Xenocys jessiæ*, *Larimus pacificus*, *Polycirrhus rathbuni*, *Kathetostoma averruncus*, *Bollmannia chlamydes*, *Scorpæna russula*, *Prionotus quiescens*, *P. albirostris*, *P. xenisma*, *Runula azalea*, *Porichthys nautopœdium*, *Otophidium indefatigable*, *Bregmaceros bathymaster*, *Azevia querna*, *Engyophrys sancti-laurentii*, *Symphurus atramentatus*, *S. leei*, *Leptophidium prorates*.

67.

1890. HOWARD, L. O., et al. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. V.—Annotated catalogue of the insects collected in 1887–88.

Proc. U. S. Nat. Mus. 1889, vol. 12, pp. 185-216.

Contains notes and descriptions of new genus and species from San Clemente Island, California, Lower California and Panama, Galapagos Islands, St. Lucia, W. I., and coasts of South America: *Thymele*. *Protoparce calapagensis*, *Centruroides luctifer*, *Spirobolus sanctæ-luciæ*, *Pectiniunguis americanus*, *Scolopendra microcanthus*, *S. galapagoensis*, *S. macracanthus*, *Vejovis galapagoensis*, *Timogenes niger*.

68.

1890. STEARNS, ROBERT E. C. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XVII.—Descriptions of new West American land, freshwater, and marine shells, with notes and comments.

Proc. U. S. Nat. Mus. 1890, vol. 13, pp. 205-225.

The following genus and species are described as new: *Cyclothyca; Helix coloradoensis*, *H. magdalenensis*, *Holospira semisculpta*, *H. arizonensis*, *Melania acutifilosa*, *Cyclothyca corrugata*, *Mitra nodocancellata*, *Venericardia barbarensis*, *Lucina æquizonata*, *Venus effeminata*, *Periploma discus*.

69.

1890. VASEY, GEORGE. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. VI.—List of the plants collected in Alaska in 1888.

Proc. U. S. Nat. Mus. 1889, vol. 12. pp. 217, 218.

A list of species by localities.

70.

1891. TANNER, Z. L. Report on the work of the U. S. F. C. steamer *Albatross* from Jan. 1, 1887, to June 30, 1888.

Rep. U. S. F. C. 1887, part 15, pp. 371–435, 4 pls.

Outline of contents: Deep-sea investigations off North Atlantic coast;

70.

1891. TANNER, Z. L.—Continued.
investigations during voyage from Norfolk, Va., to San Francisco, Cal., including West Indies, Straits of Magellan, Galapagos Islands, etc; notes on results of dredge hauls; tabular records of dredging and other operations.

71.

1891. TANNER, Z. L. The fishing grounds of Bristol Bay, Alaska: A preliminary report upon the investigations of the U. S. F. C. steamer *Albatross* during the summer of 1890.

Bull. U. S. F. C. 1889, vol. 9, pp. 279–288, 3 chts.

Notes on hydrography and on the cod and salmon fisheries.

72.

1891. GILBERT, CHARLES H. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XII.—A preliminary report on fishes collected by the steamer *Albatross* on the Pacific coast of North America during the year 1889, with descriptions of 12 new genera and 92 new species.

Proc. U. S. Nat. Mus. 1890, vol. 13, pp. 49–126.

Collections from anchorages and the dredging stations off the coasts of Washington, Oregon, California, and Lower California: *Leuroglossus, Calotomus, Xenochirus, Gillellus, Cryptotrema, Plectobranchus, Lucioblennius, Aprodon, Lycodapus, Lioglossina, Radulinus, Bathyagonus, Myctophum nannochir, M. mexicanum, M. protoculus, Bathytroctes stomias, Synodus lacertinus, Etrumeus acuminatus, Argentina sialis, Leuroglossus stilbius, Neoconger vermiformis, Ophichthys notochir, Exocœtus xenopterus, Melamphæs cristiceps, M. lugubris, Serranus œquidens, Pronotogrammus eos, Micropogon megalops, Cynoscion macdonaldi, Pseudojulis adustus, P. melanotis, P. inornatus, Halichœres sellifer, Thalassoma virens, T. grammaticum, T. socorroense, Calotomus xenodon, Microspathodon cinereus, Holacanthus clarionensis, Gobius zebra, G. dalli, Microgobius cyclolepis, Sebastichthys* sp., *S. alutus, S. rupestris, S. zacentrus, S. saxicola, S. diploproa, S. aurora, S. introniger, S. sinensis, S. goodei, Scorpœna sierra, Icelinus filamentosus, I. tenuis, I. fimbriatus, I. ocu-*

72.

1891. GILBERT, CHARLES H.—Cont'd.
latus, I. cavifrons, Radulinus asprellus, Bathyagonus nigripinnis, Xenochirus triacanthus, X. pentacanthus, X. latifrons, Paraliparis rosaceus, Gobiesox funebris, G. humeralis, G. eigenmanni, G. papillifer, Bathymaster hypoplectus, Gillellus semicinctus, G. arenicolus, Dactyloscopus lunaticus, Labrosomus cremnobates, Cryptotrema corallinum, Plectobranchus evides, Lucioblennius alepidotus, Lycodes porifer, Lycodopsis crotalinus, L. crassilabris, Aprodon cortezianus, Lycodapus fierasfer, Leptophidium pardale, L. microlepis, L. stigmatistium, L. emmelas, Ophidium galeoides, Catœtyx rubrirostris, Neobythites stelliferoides, Physiculus rastrelliger, P. nematopus, Macrurus scaphopsis, M. liolepis, M. stelgidolepis, Platophrys tœniopterus, Citharichthys xanthostigma, C. fragilis, Ancylopsetta dendritica, Hippoglossina bollmani, Lioglossina tetrophthalmus, Cynicoglossus bathybius, Halieutœa spongiosa, Melichthys bispinosus, Idiacanthus antrostomus, Bathylagus pacificus.

73.

1891. GILBERT, CHARLES H. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XIX.—A supplementary list of fishes collected at the Galapagos Islands and Panama, with descriptions of one new genus and three new species.

Proc. U. S. Nat. Mus. 1890, vol. 13, pp. 449–55.

Thirty-four species are considered, *Dialommus, Priacanthus serrula, Dialommus fuscus, Citharichthys platophrys* being described as new.

74.

1891. AGASSIZ, A. Three letters from Alexander Agassiz to Hon. Marshall McDonald, U. S. Commissioner of Fish and Fisheries, on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross*.

Bull. Mus. Comp. Zool., vol. 21, pp. 186–200.

Preliminary reports submitted during the voyage.

75.

1891. BEAN, TARLETON H. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XI.—New fishes collected off the coast of Alaska and the adjacent region southward.

Proc. U. S. Nat. Mus. 1890, vol. 13, pp. 37-45.

The 4 new genera and 17 new species here described are all from dredging stations: *Bothrocara*, *Poroclinus*, *Dasycottus*, *Malacocottus*, *Chalinura serrula*, *Antimora microlepis*, *Lycodes brevipes*, *Bothrocara mollis*, *Maynea pusilla*, *M. brunnea*, *Poroclinus rothrocki*, *Careproctus spectrum*, *Icelus scutiger*, *I. euryops*, *Dasycottus setiger*, *Malacocottus zonurus*, *Hemitripterus marmoratus*, *Psychrolutes zebra*, *Sebastolobus alascanus*, *Chauliodus macouni*, *Labichthys gilli*.

76.

1891. JORDAN, DAVID STARR. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XVIII.—List of fishes obtained in the harbor of Bahia, Brazil, and in adjacent waters.

Proc. U. S. Nat. Mus. 1890, vol. 13, pp. 313-36.

One hundred and twelve species were from Bahia and 4 species from coast of Patagonia—the following described as new: *Verecundum rasile*, *Paralichthys isosceles*, *Psammobatis rutrum*.

77.

1891. VASEY, GEORGE, and J. N. ROSE. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XVI.—Plants collected in 1889 at Socorro and Clarion islands, Pacific Ocean.

Proc. U. S. Nat. Mus. 1890, vol. 13, pp. 145-49.

Twenty-six species considered—three described as new: *Teucrium townsendii*, *Cardiospermum palmeri*, *Viguiera deltoidea townsendii*.

78.

1891. LUCAS, FREDERIC A. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XIII.—Catalogue of skeletons of birds collected at the Abrolhos Islands, Brazil, the Straits of Magellan, and the Galapagos Islands, in 1887-88.

78.

1891. LUCAS, FREDERIC A.—Cont'd.

Proc. U. S. Nat. Mus. 1890, vol. 13, pp. 127-30.

A list of 33 species, with osteological notes.

79.

1891. WHITE, CHARLES A. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. X.—On certain Mesozoic fossils from the islands of St. Pauls and St. Peters in the Straits of Magellan.

Proc. U. S. Nat. Mus. 1890, vol. 13, pp. 13, 14, 2 pls.

Two species considered—one (*Lucina townsendi*) described as new.

80.

1891. BENEDICT, J. E., and MARY J. RATHBUN. The genus Panopeus.

Proc. U. S. Nat. Mus. 1891, vol. 14, pp. 355-385, pls. XIX-XXIV.

Based in part on *Albatross* dredgings. New species described: *Panopeus areolatus*, *P. dissimilis*, *P. angustifrons*, *P. hemphillii*, *P. bermudensis*, *P. ovatus*.

81.

1891. RIDGWAY, ROBERT. List of birds collected on the Bahama Islands by the naturalists of the U. S. F. C. steamer *Albatross*.

The Auk, vol. 8, *1891*, No. 4, Oct., pp. 333-339.

A list of species by localities.

82.

1891. TOWNSEND, C. H. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XIV. Birds from the coasts of western North America and adjacent islands, collected in 1888-89, with descriptions of new species.

Proc. U. S. Nat. Mus. 1890, vol. 13, pp. 131-42.

Ninety two species considered, 12 described as new: *Speotyto rostrata*, *Zenaidura clarionensis*, *Troglodytes tanneri*, *Puffinus auricularis*, *Oceanodroma socorroensis*, *Amphispiza belli cinerea*, *Helminthophila celata sordida*, *Melospiza fasciata clementæ*, *M. fasciata graminea*, *Otocoris alpestris insularis*, *O. alpestris pallida*.

83.

1891. TOWNSEND, C. H. The scientific results of explorations by the U. S. F. C. steamer *Albatross*. XV. Reptiles from Clarion and Socorro islands and the Gulf of California, with description of a new species.

Proc. U. S. Nat. Mus. 1890, vol. 13, pp 143, 144.

Twelve species considered, one (*Uta clarionensis*) described as new.

84.

1891. TOWNSEND, C. H. Report upon the pearl fishery of the Gulf of California.

Bull. U. S. Fish Com. 1889, vol. 9, pp. 91-94, 3 pls.

Mentions dredging of pearl oysters by the *Albatross* in the Gulf of California.

85.

1892. AGASSIZ, ALEXANDER. Reports of an exploration off the west coasts of Mexico, Central and South America, and off the Galapagos Islands, in charge of Alexander Agassiz, by U. S. F. C. steamer *Albatross*, during 1891. I. Calamocrinus diomedæ, a new Stalked Crinoid, with notes on the apical system and the homologies of Echinoderms.

Mem. Mus. Comp. Zool. 1892, vol. 17, 96 pp., 32 pls.

An elaborate paper on one of the most interesting crinoids brought to light by any of the deep-sea dredging expeditions.

86.

1892. AGASSIZ, ALEXANDER. Reports on the dredging operations off the west coast of Central America to the Galapagos, to the West Coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross*. II. General sketch of the expedition of the *Albatross*, from Feb. to May, 1891.

Bull. Mus. Comp. Zool. 1892, vol. 23, pp. 1-90, 22 pls.

86.

1892. AGASSIZ, ALEXANDER—Cont'd.

Contains chapters on topography of the bottoms, character of bottom deposits, temperature, observations on pelagic fauna by *Albatross* and other expeditions, with critical remarks; acalephs, pelagic fauna of intermediate depths, fauna, flora, and topography of Galapagos Islands; deep-sea fauna compared with Caribbean Sea; color of deep-sea types, etc.

87.

1892. TANNER, Z. L. Report of the investigations of the U. S. F. C. steamer *Albatross* for the year ending June 30, 1889.

Rep. U. S. F. C. 1888, part 16, pp. 395-512, 3 pls.

Investigations of fisheries along coasts of Alaska, Washington, Oregon, California, Lower California, and in Gulf of California, notes on results of dredge hauls, tabular records of dredging and other operations.

88.

1892. TANNER, Z. L. Cable surveys from California to the Hawaiian Islands, 1891-92.

Trans. and Proc. Geog. Soc. Pacific, San Francisco, 1892, vol. 3, pp. 63-83

The article is based chiefly on *Albatross* soundings, and the practicability of the route demonstrated.

89.

1892. Report of the results of the survey for the purpose of determining the practicability of laying a telegraphic cable between the United States and the Hawaiian Islands.

Senate Doc. 153, 52d Congress, 1st sess., 26 pp., 4 photos, 9 charts.

This report contains extensive tabulated data on the sounding operations of the U. S. F. C. steamer *Albatross* between San Francisco and Monterey, Cal., and Honolulu, H. I., with records of temperatures and specific gravities. Similar records on the work of the U. S. S. *Thetis* between Point Conception, Cal., and Hilo, H. I. The route along the line between Monterey and Honolulu reported as the most practicable. The *Albatross* data are from a report made by Lieut. Commander Z. L. Tanner, U. S. N., commanding.

90.

1892. Hydrographic Office, U. S. Navy. Submarine cables.

Rept. No. 103, U. S. Hyd. Office, 67 pp., maps, charts, etc.

Prepared for publication as a part of the report of the survey by the U. S. F. C. steamer *Albatross* and the U. S. S. *Thetis* for a cable route between San Francisco and the Hawaiian Islands. Contains general instructions for deep-sea sounding by Commander Z. L. Tanner, U. S. N., with information respecting submarine cables.

91.

1892. Goode, G. Brown, and T. H. Bean. The present condition of the study of deep-sea fishes.

Proc. Am. Ass. Adv. Sci., vol. 40, p. 324.

An abstract—a brief reference to the progress of deep-sea ichthyology.

92.

1892. Gilbert, Charles H. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXI. Descriptions of apodal fishes from the tropical Pacific.

Proc. U. S. Nat. Mus. 1891, vol. 14, pp. 347–52.

Collections from dredging stations off Panama, Galapagos Islands, and in the Gulf of California. Two genera and five species described as new: *Xenomystax*, *Ilyophis*, *Chlopsis equatorialis*, *Xenomystax atrarius*, *Ophisoma prorigerum*, *O. macrurum*, *Ilyophis brunneus*.

93.

1892. Gilbert, Charles H. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXII. Descriptions of thirty-four new species of fishes collected in 1888 and 1889, principally among the Santa Barbara Islands and in the Gulf of California.

Proc. U. S. Nat. Mus. 1891, vol. 14, pp. 539–66.

Collections from shore and dredging stations. The genus *Chriolepis* and the following species described as new: *Raia trachura*, *Catulus xaniurus*, *C. cephalus*, *C. brunneus*, *Eulamia platyrhynchus*, *Stolephorus cultratus*, *Myctophum regale*, *Alepocephalus tenebrosus*, *Porogadus promelas*, *Siphostoma carinatum*, *Callechelys peninsulæ*, *Atherinops insularum*, *Mugil setosus*, *Diplectrum sciurus*, *Mycteroperca pardalis*, *Bodianus acanthistius*, *Upeneus xanthogrammus*, *Pomacentrus leucorus*, *Gobius microdon*, *Bollmania ocellata*, *B. macropoma*, *B. stigmatura*, *Gobiosoma crescentalis*, *Chriolepis minutillus*, *Gillellus ornatus*, *Prionotus gymnostethus*, *Careproctus melanurus*, *Paraliparis cephalus*, *P. mento*, *Trachyrhynchus helolepis*, *Macrurus pectoralis*, *Lycodes diapterus*, *Symphurus fasciolaris*, *Antennarius reticularis*.

94.

1892. Goës, A. Reports on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross* during 1891. III. On a peculiar type of Arenaceous Foraminifer from the American tropical Pacific, Neusina agassizi.

Bull. Mus. Comp. Zool. 1892, vol. 23, pp. 195–98, 1 pl.

95.

1892. Dall, William H. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XX. On some new or interesting West American shells obtained from the dredgings of the U. S. F. C. steamer *Albatross* in 1888, and from other sources.

Proc. U. S. Nat. Mus. 1891, vol. 14, pp. 173–91, 3 pls.

Thirty-four species are considered; the genus *Calyptogena* and twenty-one species are described as new: *Trophon cerrosensis*, *Cancellaria crawfordiana*, *Terebratella occidentalis obsoleta*, *Buccinum strigillatum*, *B. taphrium*, *Mohnia frielei*, *Strombella middendorfii*, *S. fragilis*, *S. melonis*, *Chrysodomus perisceliduS*, *C. phœniceus*, *C. eucosmius*, *C. hypolispus*, *C. acosmius*, *C. halibrectus*, *Trophon scitulus*, *T. disparilis*, *Solemya johnsoni*, *Calyptogena pacifica*, *Limopsis vaginatus*, *Chrysodomus ithius*.

96.

1892. RATHBUN, RICHARD. The U. S. Fish Commission, some of its work.

Century Mag. 1892, vol. 43, Mar., pp. 679–697; 20 cuts.

Contains some account of the fishery and deep-sea investigations of the *Albatross*, with illustrations showing her methods of work.

97.

1892. VERRILL, A. E. The Marine Nemerteans of New England and adjacent waters.

Trans. Conn. Acad. Arts and Sciences 1892, vol. 8, pp. 382–456; 7 pls., 9 figs.

Based in part on *Albatross* collections. New genera and species described: *Nectonemertes, Hyalonemertes; Amphiporus multisorus, A. heterosorus, A. tetrasorus, A. frontalis, A. mesosorus, A. cœcus, Tetrastemma roseum, T. vermiculus catenulatum, T. dorsale unicolor, Lineus bicolor, Micrura dorsalis, M. rubra, Nectonemertes mirabilis, Hyalonemertes atlantica.*

98.

1892. VERRILL, A. E. Marine Planarians of New England.

Trans. Conn. Acad. Arts and Sciences 1892, vol. 8, pp. 459–520, 5 pls., 2 figs.

Based in part on *Albatross* collections. New genera and species: *Eustylochus, Heterostylochus, Planoceropsis Stylochus frontalis, S. crassus, Leptoplana virilis, L. angusta, Trigonoporus dendriticus, Eurylepta maculosa, Aphanostoma aurantiacum, A. olivaceum.*

98a.

1892. Cruise of the *Albatross*.

Bull. Am. Geog. Soc. 1892, vol. 24, No. 3, pp. 464–467.

Notes from report to U. S. Fish Commission, relating to work of the vessel at various points between the Aleutian Islands and Gulf of California.

99.

1893. TANNER, Z. L. Report upon the investigations of the U. S. F. C. steamer *Albatross* from July 1, 1889, to June 30, 1891.

Rep. U. S. F. C. 1889–1891, part 17, pp. 207–342, 1 pl.

Outline of contents: Voyage to southeast Alaska with Senate Committee on Indian Affairs; investigations of fishing grounds off Oregon, Washington, California, and in Bering Sea; scientific investigations off the west coast of Mexico and Central America and off the

99.

1893. TANNER, Z. L.—Continued.

Galapagos Islands; notes on results of dredge hauls; report of fishery expert; tabular records of dredging and other operations.

99a.

1893. BROOKS, WILLIAM K. The genus Salpa.

Mems. Biol. Lab. Johns Hopk. Univ. 1893, 11, pp. 1–371, 57 pls.

Based in part on *Albatross* collections. A monograph of the genus.

100.

1893. BENEDICT, JAMES E. Corystoid crabs of the genera Telmessus and Erimacrus.

Proc. U. S. Nat. Mus. 1892, vol. 15, pp. 223–30, 3 pls.

Erimacrus described as a new genus.

101.

1893. BENEDICT, JAMES E. Preliminary descriptions of 37 new species of Hermit Crabs of the genus *Eupagurus* in U. S. Nat. Museum.

Proc. U. S. Nat. Mus. 1892, vol. 15, pp. 1–26.

Based largely on *Albatross* collections. New species described: *Eupagurus alaskensis, E. aleuticus, E. patagoniensis, E. smithi, E. impressus, E. floridanus, E. exilis, E. albus, E. gladius, E. defensus, E. capillatus, E. brandti, E. dalli, E. tanneri, E. confragosus, E. cornutus, E. townsendi, E. rathbuni, E. minutus, E. purpuratus, E. hemphilli, E. beringanus, E. newcombei, E. undosus, E. kennerlyi, E. setosus, E. munitus, E. gilli, E. curacaoensis, E. californiensis, E. mexicanus, E. roseus, E. corallinus, E. coronatus, E. varians, E. cervicornis, E. parvus, E. hispidus.*

102.

1893. BEARD, J. CARTER. The Abysmal depths of the sea.

Cosmopolitan Magazine, Mar., pp. 532–538, 11 cuts.

A popular account of deep-sea life and conditions, based chiefly on the investigations of the *Albatross*.

103.

1893. BEECHER, CHARLES E. The development of *Terebratalia obsoleta* Dall.

Trans. Conn. Acad. Arts and Sciences 1893, vol. 9, pp. 392–399, 3 pls.

104.

1893. FAXON, WALTER. Reports on dredging operations off the west coast of Central America, to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by U. S. F. C. steamer *Albatross* during 1891. VI.—Preliminary Descriptions of new species of Crustacea.

Bull. Mus. Comp. Zool. 1893, vol. 24, pp. 149–220.

Five new genera and one hundred new species are described: *Maiopsis, Trachycarcinus, Calastacus, Scolophthalmus, Ceratomysis, Euprognatha granulata, Anamathia occidentalis, Maiopsis panamensis, Lambrus hassleri, Xanthodes sulcatus, Panopeus latus, P. tanneri, Achelous affinis, Trachycarcinus corallinus, Gecarcinus malpilensis, Pinnixa panamensis, Osachila lata, Æthusa ciliatifrons, Æ. pubescens, Æthusina smithiana, Cymopolia tuberculata, Raninops fornicata, Rhinolithodes cristatipes, Echinocerus diomedeæ, Paralomis aspera, P. longipes, Lithodes panamensis, Cancellus tanneri, Pylopagurus longimanus, P. affinis, P. hirtimanus, Catapagurus diomedeæ, Spiropagurus occidentalis, Paguristes fecundus, Petrolisthes agassizii, Pachycheles panamensis, Munida obesa, M. refulgens, M. propinqua, M. gracilipes, Galacantha diomedeæ, Munidopsis vicina, M. agassizii, M. villosa, M. hystrix, M. sericea, M. margarita, M. crinita, M. ornata, M. scabra, M. tanneri, M. hamata, M. quadrata, M. depressa, M. carinipes, M. hendersoniana, M. inermis, Uroptychus nitidus occidentalis, U. pubescens, U. bellus, Axius crista-galli, Calastacus stilirostris, Nephropsis occidentalis, Willemœsia inornata, Polycheles tanneri, P. sculptus pacificus, P. granulatus, Eryonicus spinulosus, Gnathophyllum panamense, Sclerocrangon atrox, S. procax, Pontophilus occidentalis, Paracrangon areolata, Glyphocrangon alata, G. spinulosa, G. sicarius, Heterocarpus vicarius, H. hostilis, H. affinis, Nematocarcinus agassizii, Acanthephyra cristata, A. cucullata, Notostomus fragilis, N. westergreni, Pasiphœia cristata americana, P. magna, Sicyonia affinis, S. picta, Peneus balboæ, Solenocera agassizii, Peneopsis diomedeæ, Haliporus nereus, H. doris, H. thetis, Aristæus occidentalis, Hemipeneus triton, Benthesicymus tanneri, Sergestes inous, S. phorcus, S. halia, Gnathophausia dentata, Eucopia sculpticauda, Petalophthalmus pacificus, Scolophthalmus lucifugus, Ceratomysis spinosa.*

105.

1893. BEAN, TARLETON H. Description of a new species of star-gazer (*Cathetostoma albigutta*) from the Gulf of Mexico.

Proc. U. S. Nat. Mus. 1892, vol. 15, pp. 121, 122.

Based on specimens from *Albatross* dredgings.

105a.

1893. EVERMANN B. W. A skeleton of Steller's sea-cow.

Science, vol. 21, No. 52, Feb. 3, pp. 5–9.

An account of the finding of a nearly perfect skeleton on Bering Island and its purchase for the U. S. National Museum at the time of the visit of the *Albatross* to that island in 1892.

106.

1893. RATHBUN, MARY J. Catalogue of the crabs of the family Pericerídæ in the U. S. National Museum.

Proc. U. S. Nat. Mus. 1892, vol. 15, pp. 231–277, pls. XXVIII–XL.

Based largely on *Albatross* collections. New species described: *Libinia macdonaldi, L. spinimana, L. mexicana, Pericera triangulata, P. atlantica, P. contigua, Macrocœloma tenuirostra, Othonia carolinensis, O. nicholsi, O. rotunda, Mithrax pilosus, M. hemphilli, M. sinensis, M. bahamensis, M. braziliensis.*

107.

1893. LUDWIG, HUBERT. Reports on the dredging operations off the west coast of Central America, to the Galapagos, to the west coast of Mexico, and to the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross* in 1897. IV. Vorläufiger Bericht über die erbeuteten Holothurien.

Bull. Mus. Comp. Zool. 1893, vol. 24, pp. 105–114.

A preliminary report on the collection of holothurians, with references to new genera and species to be described in a final report. See paper No. 124 (The Holothurioidea) by the same author.

108.

1893. SCUDDER, SAMUEL H. Reports on the dredging operations off the west coast of Central America, to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross* during 1891. VII. The Orthoptera of the Galapagos Islands.

Bull. Mus. Comp. Zool. 1893, vol. 25, pp. 1–26, 12 pls.

Five genera and seven species are described as new: *Galapagia*, *Closteridea*, *Halmenus*, *Desmopleura*, *Nescœcia*, *Anisolabis bormansi*, *Closteridea bauri*, *Halmenus robustus*, *Desmopleura concinna*, *Anaulocomera darwinii*, *Conocephalus insulanus*, *Gryllus galapageius*.

109.

1893. SCHIMKÉWITSCH, W. M. Reports on the dredging operations off the west coast of Central America, to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross* during 1891. VIII. Compte-Rendu sur les Pantopodes.

Bull. Mus. Comp. Zool. 1893, vol. 25, pp. 27–44, 2 pls.

New species here described are as follows: *Collossendeis bicincta*, *C. macerrima minor*, *C. gracilis pallida*, *C. subminuta*, *Ascorhynchus agassizii*, *Pallenopsis californica*.

110.

1893. MERRILL, GEORGE P. Reports on the dredging operations off the west coast of Central America, to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross*. V. Report upon rocks collected from the Galapagos Islands.

Bull. Mus. Comp. Zool. 1893, vol. 16, pp. 235–237.

111.

1894. TANNER, Z. L. Report upon the investigations of the U. S. F. C. steamer *Albatross* for the year ending June 30, 1892.

Rep. U. S. F. C. 1892, part 18, pp. 1–64, 1 pl.

General contents: Cruise to Pribilof Islands with U. S. Bering Sea commissioners; deep-sea and fishery investigations off coast of Washington; survey of cable route between California and Hawaiian Islands; fur-seal investigation; voyage to Commander Islands; tabular records of dredging, sounding, and other operations.

112.

1894. RIDGWAY, ROBERT. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXVII. Catalogue of a collection of birds made in Alaska by Mr. C. H. Townsend during the cruise of the U. S. F. C. steamer *Albatross* in the summer and autumn of 1888.

Proc. U. S. Nat. Mus. 1893, vol. 16, pp. 663–665.

A list of 35 species from localities along the southern side of the Alaska Peninsula.

113.

1894. RIDGWAY, ROBERT. Description of a new storm petrel from the coast of western Mexico.

Proc. U. S. Nat. Mus. 1893, vol. 16, pp. 687–688.

Oceanodroma townsendi described from *Albatross* collections.

114.

1894. PECK, JAMES I. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXVI. Report on the Pteropods and Heteropods collected by the U. S. F. C. steamer *Albatross* during the voyage from Norfolk, Va., to San Francisco, Cal., 1887–88.

Proc. U. S. Nat. Mus. 1893, vol. 16, pp. 451–466, 3 pls.

Collections from surface and dredging stations; the genera and species are discussed chiefly with reference to their distribution, form, and anatomy, and as bottom deposits.

115.

1894. STEARNS, ROBERT E. C. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXV.—Report on the Mollusk-fauna of the Galapagos Islands, with descriptions of new species.

Proc. U. S. Nat. Mus. 1893, vol. 16, pp. 353–450, 1 pl., 1 map.

This paper contains chapters on geographical and physical characteristics, origin, distribution, etc. There are supplementary lists of other Galapagos collections, among them a list of 18 new species previously described by Dall from *Albatross* dredgings near the Galapagos Islands. New species: *Bulimulus habeli*, *Onchidium lesliei*, *Nitidella incerta*, *Littorina galapagiensis*.

116.

1894. STEARNS, ROBERT E. C. The shells of the Tres Marias and other localities along the shores of Lower California and the Gulf of California.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 139–204.

Based in part on *Albatross* collections.

117.

1894. RATHBUN, RICHARD. A summary of the fishery investigations conducted in the North Pacific Ocean and Bering Sea from July 1, 1888, to July 1, 1892, by the U. S. F. C. steamer *Albatross*.

Bull. U. S. F. C. 1892, vol. 12, pp. 127–201, 5 chts.

Contains descriptions of the fishing grounds with the results of the fishing and dredging operations conducted on them; notes on deep-sea explorations; bibliography. The bay and off-shore fishing grounds from Bering Sea to the Gulf of California, with their fisheries, are considered in detail.

118.

1894. RATHBUN, MARY J. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXIV.—Descriptions of new genera and species of crabs from the west coast of North America and the Sandwich Islands.

Proc. U. S. Nat. Mus. 1893, vol. 16, pp. 223–60.

Six genera and 46 species described as new: *Ericerus*, *Erileptus*, *Œdiplax*, *Scleroplax*, *Opisthopus*, *Cryptophrys*, *Ericerus latimanus*, *Podochela tenuipes*, *P.*

118.

1894. RATHBUN, MARY J.—Cont'd.

mexicana, *P. lobifrons*, *Erileptus spinosus*, *Anasimus rostratus*, *Inachoides magdalenensis*, *Cyrtomaia smithi*, *Collodes tenuirostris*, *Sphenocarcinus agassizi*, *Euprognatha bifida*, *Pugettia dalli*, *Neorhynchus mexicanus*, *Lambrus exilipes*, *Mesorrhœa gilli*, *Lophozozymus frontalis*, *Cycloxanthus californiensis*, *Micropanope polita*, *Menippe convexa*, *Pilodius flavus*, *Pilumnus gonzalensis*, *Neptunus iridescens*, *Œdiplax granulatus*, *Speocarcinus granulimanus*, *Carcinoplax dentatus*, *Gelasimus gracilis*, *G. latimanus*, *G. coloradensis*, *Brachynotus jouyi*, *Pinnixa occidentalis*, *P. californiensis*, *Cryptophrys concharum*, *Scleroplax granulatus*, *Opisthopus transversus*, *Mursia hawaiiensis*, *Platymera californiensis*, *Ebalia americana*, *Myra townsendi*, *M. subovata*, *Nursia tuberculata*, *Randallia distincta*, *Ethusa lata*, *Cymopolia fragilis*, *C. zonata*, *Pachygrapsus longipes*, *Xanthodes minutus*.

119.

1894. RATHBUN, MARY J. Catalogue of the crabs of the family Maiidæ in the U. S. National Museum.

Proc. U. S. Nat. Mus. 1893, vol. 16, pp. 63–103, pls. III–VIII.

Based largely on *Albatross* collections. New genus and species described: *Lepteces*, *Chionœcetes tanneri*, *Cœlocerus grandis*, *Lepteces ornatus*, *Hyastirus caribbœus*.

120.

1894. MCMURRICH, J. PLAYFAIR. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXIII. Report on the Actiniæ collected by the *Albatross* during the winter of 1887–88.

Proc. U. S. Nat. Mus. 1893, vol. 16, pp. 119–216, 17 pls.

Chapters on the classification and geographical and bathymetrical distribution, with descriptions of 7 new genera and 28 new species: *Halcurias*, *Myonanthus*, *Pycnanthus*, *Cymbactis*, *Chitonanthus*, *Cradactis*, *Oractis*, *Edwardsia intermedia*, *Oractis diomedeæ*, *Halcurias pilatus*, *Peachia koreni*, *Anemonia variabilis*, *A. inequalis*, *Myonanthus ambiguus*, *Bolocera occidua*, *B. pannosa*, *B. brevicornis*, *Paractis vinosa*, *Actinernus plebeius*, *Actinostola excelsa*, *A. pergamentacea*, *Pycnanthus maliformis*, *Cymbactis fœculenta*, *Sagartia lactea*, *S. sancti-matthœi*, *S. paradoxa*, *Adamsia involvens*, *Stephanactis hyalonematis*, *Leiotealia badia*, *Oulactis californica*, *Cradactis digitata*, *Cerianthus vas*.

121.

1894. STUDER, THÉOPHILE. Reports on the dredging operations off the west coast of Central America, to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross* during 1891. X. Note préliminaire sur les Alcyonaires.

Bull. Mus. Comp. Zool. 1894, vol. 25, pp. 55–70.

The following species are described as new: *Clavularia gregaria*, *Vœringia pacifica*, *Pennatula alata*, *P. distorta pacifica*, *P. kœllikeri*, *Stachyptilum superbum*, *Kophobelemnon affine*, *Umbellula geniculata*, *Cladiscus agassizii*, *Distichoptilum verrillii*, *Anthothela argentea*, *Dasygorgia fruticosa*, *Lepidisis inermis*, *Calyptrophora agassizii*, *Stachyodes ambigua*, *Stenella ramosa*, *Amphilaphis abietina*, *Acanthogorgia brevispina*, *Psammogorgia variabilis*, *Callistephanus wrightii*.

122.

1894. CLARKE, SAMUEL F. Reports on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross* during 1891. XI. The Hydroids.

Bull. Mus. Comp. Zool. 1894, vol. 25, pp. 71–78, 5 pls.

The following species are described as new: *Obelia castellata*, *Lictorella geniculata*, *Sertularia variabilis*, *Halecium argenteum*.

123.

1894. WOODWORTH, W. McM. Reports on dredging operations off the west coast of Central America, to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross* during 1891. IX. Report on the Turbellaria.

Bull. Mus. Comp. Zool. 1894, vol. 25, pp. 49–52, 1 pl.

Stylochoplana californica and *Prosthecerœus panamensis* described as new.

124.

1894. LUDWIG, HUBERT. Reports on an exploration off the west coasts of Mexico, Central and South America, and off the Galapagos Islands, in charge of Alexander Agassiz, by the U. S. F. C. steamer *Albatross* during 1891. XII. The Holothurioidea.

Mem. Mus. Comp. Zool. 1894, vol. 17, No. 3, pp. 1–183, 19 pl.

A systematic arrangement of the species, with notes. The following genera and species are described as new: *Synallactes*, *Mesothuria*, *Scotodeima*, *Lætmophasma*, *Capheira*, *Pelagothuria*, *Sphœrothuria*, *Pœlopatides suspecta*, *Synallactes alexandri*, *S. œnigma*. *Mesothuria multipes*, *Meseres macdonaldi*, *Euphronides tanneri*, *E. verrucosa*, *Psychropotes raripes*, *P. dubiosa*, *Benthodytes incerta*, *Deima pacificum*, *Oneirophanta affinis*, *Scotodeima setigerum*, *Lætmogone theeli*, *Lætmophasma fecundum*, *Capheira sulcata*, *Peniagone intermedia*, *Scotoanassa gracilis*, *Pelagothuria natatrix*, *Phyllophorus aculeatus*, *Psolidium panamense*, *P. gracile*, *Psolus diomedeæ*, *P. digitatus*, *P. pauper*, *Sphœrothuria bitentaculata*, *Caudina californica*, *Trochostoma granulatum*, *T. intermedium*, *Ankyroderma spinosum*.

125.

1894. BERGH, RUDOLPH. Reports on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross* during 1891. XIII. Die Opisthobranchien.

Bull. Mus. Comp. Zool. 1894, vol. 25, pp. 125–233, 12 pl.

A systematic arrangement with descriptions of the following new genera and species: *Geitodoris*, *Gargamella*, *Æolidia herculea*, *Himatella trophina*, *Tritonia diomedea*, *T. exsulans*, *Geitodoris immunda*, *Gargamella immaculata*, *Chromodoris agassizii*, *Tridachia diomedea*, *Doridium purpureum*, *D. diomedeum*, *D. ocelligerum*, *Navarchus œnigmaticus*, *Thordisa dubia*, *Gastropteron pacificum*.

126.

1894. McDONALD, MARSHALL. The salmon fisheries of Alaska.

Bull. U. S. F. C. 1892, vol. 12, pp. 1–20, 9 pls.

Contains chapters on origin and development of Alaskan salmon fisheries, statistics, present condition, methods, regulations; life history of the salmon by Dr. T. H. Bean; bibliography, etc.

127.

1894. MANN, ALBERT. List of Diatomaceæ from a deep-sea dredging in the Atlantic Ocean off Delaware Bay, by the *Albatross*.

Proc. U. S. Nat. Mus. 1893, vol. 16, pp. 303–312.

128.

1894. EIGENMANN, CARL H., and C. H. BEESON. A revision of fishes of the subfamily Sebastinæ of the Pacific coast of America.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 375–407.

Refers to many species brought to light by *Albatross* explorations.

129.

1894. KNOWLTON, F. H. A review of the fossil flora of Alaska, with descriptions of new species.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 207–243, 1 pl.

Based in part on *Albatross* collections. New species described from *Albatross* collections are as follows: *Salix minuta*, *Juglans townsendi*, *Fraxinus herendeenensis*, *Rhus frigida*, *Zizyphus townsendi*, *Phyllites arctica*. An abstract from this paper, entitled "Fossil flora of Alaska," is contained in Bull. Geol. Soc. Am., vol. 5, 1893, pp. 573–590.

130.

1894. ORTMANN, ARNOLD. Reports on the dredging operations off the west coast of Central America, to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the steamer *Albatross* during 1891. XIV. The Pelagic Schizopoda.

Bull. Mus. Comp. Zool. 1894, vol. 25, pp. 99–110, 1 pl.

An annotated catalogue with the following species described as new: *Thysanopoda agassizi*, *Euphausia diomedeæ*, *Boreomysis californica*.

131.

1894. HICKSON, SYDNEY J. The fauna of the deep sea.

12mo. xvi+169 pp. 23 ills. Appleton's, N. Y. (Modern science series, edited by Sir John Lubbock.)

A condensed presentation of the more important facts respecting deep-sea life; contains references to investigations by steamship *Albatross*.

132.

1895. TANNER, Z. L. Report on the work of the steamer *Albatross* for the year ending June 30, 1893.

Rep. U. S. F. C. 1893, part 19, pp. 305–41, 4 pls.

General contents: Fur-seal investigations at Pribilof Islands; pelagic sealing inquiries and patrol of Bering sea; tabular records of operations.

133.

1895. TANNER, Z. L. On the appliances for collecting pelagic organisms, with special reference to those employed by the U. S. Fish Commission.

Bull. U. S. F. C. 1894, vol. 14, pp. 143–51, 4 pls.

Descriptions of surface and intermediate towing nets.

134.

1895. TANNER, Z. L. The U. S. Fish Commission and its relations with the U. S. Navy.

Proc. U. S. Naval Inst., 21, No. 1. Whole number 73.

135.

1895. BEAN, BARTON A. Scientific results of explorations by the *Albatross*. XXXIII.—Descriptions of two new flounders.

Proc. U. S. Nat. Mus. 1894, vol 17, pp. 633–36.

From *Albatross* dredging stations off Florida. The genus *Gastropsetta* and the species *G. frontalis* and *Cyclopsetta chittendeni* are described as new.

136.

1895. GOODE, G. BROWN, and TARLETON H. BEAN. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXVIII.—On *Cetomimidæ* and *Rondeletiidæ*, two new families of bathy-

136.

1895. GOODE, G. BROWN, and TARLETON H. BEAN—Continued.
bial fishes from the Northwestern Atlantic.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 451-54.

Descriptions of genera and species: *Cetomimus, Rondeletia, Cetomimus gillii, C. storeri, Rondeletia bicolor.*

137.

1895. GOODE, G. BROWN, and TARLETON H. BEAN. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXIX.—A revision of the order Heteromi, deep-sea fishes, with a description of the new generic types, Macdonaldia and Lipogenys.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 455-70.

Descriptions of new genera and species, with analytical keys: *Gigliolia, Macdonaldia, Lipogenys, Gigliolia moseleyi, Lipogenys gillii.*

138.

1895. GOODE, G. BROWN, and TARLETON H. BEAN. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXX.—On Harriotta, a new type of Chimæroid fish from the deep waters of the Northwestern Atlantic.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 471-73, 1 pl.

Description of a new genus and species: *Harriotta raleighana.*

139.

1895. GOODE, GEORGE BROWN, and TARLETON H. BEAN. Oceanic ichthyology, a treatise on the deep-sea and pelagic fishes of the world, based chiefly upon the collections made by the steamers *Blake*, *Albatross*, and *Fish Hawk*, in the northwestern Atlantic, with an atlas containing 417 figures.

Spec. Bull. U. S. Nat. Mus. XXXV+553 pp. Atlas, XXIII+26 pp., 123 pls.

An elaborate work, presenting a discussion of all deep-sea and pelagic fishes dwelling in the open ocean, either at the surface or at bottom, beyond a depth of 500 feet; separate volume of plates. List of genera and species here described as new: *Abyssicola, Æthoprora, Alcockia, Aldrovandia, Bathylaco, Benthocometes, Bonapartia, Caulophryne, Celema, Cetomimus, Collettia, Conocara, Dicromita, Electrona, Gigliolia, Grammatostomias, Harriotta, Helicolenus, Hypoclydonia, Lampadena, Mœbia, Moseleya, Penopus, Rondoletia, Steindachneria, Yarrella, Macdonaldia, Scylliorhinus profundorum, Harriotta raleighana, Conocara macdonaldi, Bathytroctes antillarum, B. æquatoris, Argentina striata, Bathylagus euryops, B. benedicti, Bathylaco nigricans, Chlorophthalmus truculentus, Rondeletia bicolor, Cetomimus gillii, C. storeri, Myctophum opalinum, M. remiger, Lampanyctus alatus, L. guntheri. L. gemmifer, L. lacerta, Notoscopelus quercinus, N. margaritiferus, N. castaneus, Lampadena speculigera, Æthoprora lucida, Æ. effulgens, Nannobrachium macdonaldi, Bonapartia pedaliota, Yarrella blackfordi, Astronesthes gemmifer, Echiostoma margarita, Grammatostomias dentatus, Photonectes gracilis, Halosaurus guntheri, Aldrovandia gracilis, A. pallida, Congermurœna flava, Hoplunnis diomedianus, Pisoodonophis cruentifer, Gigliolia moseleyi, Lipogenys gillii, Stephanoberyx gillii, Bathyclupea argentea, Dicrotus parvipinnis, Benthodesmus atlanticus, Cyttus hololepis, Epigonus occidentalis, Hypoclydonia bella, Scorpœna cristulata, S. agassizii, Helicolenus maderensis, Pontinus rathbuni, P. macrolepis, P. longispinis, Paraliparis copei, Callionymus himantophorus, Lycodes zoarchus, Dicromita agassizii, Bassogigas gillii, Penopus macdonaldi, Phycis cirratus, Lœmonema melanurum, Chalinura brevibarbis, Steindachneria argentea, Prionotus militaris, P. egretta, P. beanii, Peristedion gracile, Caulophrynejordani.*

139.

1895. The same. Smithsonian Contrib. to Knowl. Vol. XXX, pp. XXXV+553; Vol. XXXI, pp. XXII+26 pp., 123 pls.

This work was also published in the Memoirs of the Museum of Comparative Zoology as vol. 22, "in connection with the National Museum and the Smithsonian Institution," and dated September, 1896.

140.

1895. GOODE, G. BROWN, and TARLETON H. BEAN. New deep-sea fishes.

Am. Nat., vol. 29, pp. 281.

A notice of the author's paper in Proc. U. S. Nat. Mus., vol. 17, 1894.

140a.

1895. GOODE, G. BROWN, and TARLETON H. BEAN. More deep-sea fishes.

Am. Nat., vol 29, pp. 376, 3 pls.

A reference to the above, with plates and additional remarks.

141.

1895. GILBERT, CHARLES H. The ichthyological collections of the steamer *Albatross* during the years 1890 and 1891.

Rep. U. S. F. C. 1893, part 19, pp. 393–476, 16 pls.

The fishes were collected in Bering Sea and the North Pacific Ocean, along the coasts of Alaska, Washington, and California, and are from shore and dredging stations. A systematic arrangement of the species; the following genera and species described as new: *Elanura*, *Rhinoliparis*, *Gyrinichthys*, *Bathyphasma*, *Lethotremus*, *Lyconectes*, *Derepodichthys*, *Raja abyssicola*, *R. aleutica*, *Bathylagus borealis*, *Sebastolobus altivelis*, *Icelus vicinalis*, *I. canaliculatus*, *I. spiniger*, *Icelinus borealis*, *Artediellus pacificus*, *Cottus aleuticus*, *Acanthocottus sellaris*, *A. laticeps*, *A. profundorum*, *Triglops beani*, *T. scepticus*, *T. xenostethus*, *Elanura forficata*, *Oligocottus acuticeps*, *Paricelinus thoburni*, *Aspidophoroides bartoni*, *Odontopyxis frenatus*, *O. leptorhynchus*, *Xenochirus alascanus*, *Paraliparis holomelas*, *P. ulochir*, *Careproctus ectenes*, *C. colletti*, *C. phasma*, *C. ostentum*, *C. simus*, *Gyrinichthys minytremus*, *Rhinoliparis barbulifer*, *Liparis cyclostigma*, *L. fucensis*, *Leptoblennius mackayi*, *Bathyphasma ovigerum*, *Lethotremus muticus*, *Lyconectes aleutensis*, *Lycodes palearis*, *Lycodapus extensus*, *L. parviceps*, *Derepodichthys alepidotus*, *Nematonurus cyclolepis*, *Chalinura filifera*, *Limanda proboscidea*.

142.

1895. DALL, WILLIAM HEALEY. Scientific results of explorations by U. S. F. C. steamer *Albatross*. XXXIV. Report on Mollusca and Brachiopoda dredged in deep water, chiefly near the Hawaiian Islands, with illustrations of hitherto unfigured species from Northwest America.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 675–733, 10 pls.

Twenty-eight species are described as new, a few being discussed anatomically at considerable length. New species as follows: *Scaphander alatus*, *Sabatia pustulosa*, *Pleurotoma microscelida*, *Pleurotomella gypsina*, *Liothyrina clarkeana*, *P. hawaiiana*, *P. climacella*, *Spergo glandiniformis*, *S. daphnelloides*, *Lunatia sandwichensis*, *Solariella reticulina*, *Emarginula hawaiiensis*, *Dentalium phaneum*, *D. complexum*, *Euciroa pacifica*, *Lyonsiella alaskana*, *Pectunculus arcodentiens*, *Buccinum aleuticum*, *B. ovulum*, *Chrysodomus insularis*, *C. magnus*, *Beringius frielei*, *B. aleuticus*, *Frieleia halli*, *Hemithyris beecheri*, *H. craneana*, *Macandrevia americana*, *M. craniella*, *M. diamantina*.

142.

1895. DALL, WILLIAM HEALEY—Cont'd.

143.

1895. DALL, W. H. Synopsis of a review of the genera of recent and Tertiary Mactridæ and Mesodesmatidæ.

Proc. Malacological Soc. (Lond.), vol. 1, pt. 5, Mar., pp. 203–213.

Based in part on *Albatross* collections.

144.

1895. DALL, W. H. New species of land shells from Galapagos Islands.

The Nautilus, vol. 8, May, No. 11, pp. 126–127.

The following species from *Albatross* collections are described as new: *Bulimulus reibischii*, *B. tanneri*.

145.

1895. COPE, E. D. On some new North American snakes.

Am. Nat., vol. 29, pp. 676–680.

The following, derived partly from *Albatross* collections, are described as new: *Natrix compressicauda tæniata*. *N. fasciata pictiventris*, *Seminatrix pygœus*, *Zamenis stejnegerianus*, *Z. conirostris*, *Z. lateralis fuliginosus*.

146.

1895. BENEDICT, JAMES E. Scientific results of explorations by the steamer *Albatross*. XXXI. Descriptions of new genera and species of crabs of the family Lithodidæ, with notes on the young of Lithodes camtschaticus and Lithodes brevipes.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 473–88.

Collections from shore and dredging stations chiefly in the North Pacific Ocean and Bering Sea. Four genera and 11 species are described as new: *Leptolithodes*, *Pristopus*, *Œdignathus*, *Lepeopus*, *Lithodes goodei*, *L. diomedeæ*, *L. æquispinus*, *L. couesi*, *L. rathbuni*, *L. californiensis*, *Leptolithodes multispinus*, *L. papillatus*, *Pristopus verrilli*, *Œdignathus gilli*, *Lepeopus forcipatus*.

147.

1895. BIGELOW, ROBERT PAYNE. Scientific results of explorations by the U. S. F. C. steamer *Albatross*. XXXII. Report on the Crustacea of the order Stomatopoda collected by the steamer *Albatross* between 1885 and 1891, and on other specimens in the U. S. National Museum.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 489–550, 3 pls.

Collections from the Atlantic and Pacific shore and dredging stations. The paper contains classification, with analytical keys, bibliography, and descriptions of the genus *Odontodactylus* and 14 species originally described in Circ. Johns Hopk. Univ. 88, 1891; 106, 1893: *Gonodactylus spinosus*, *Odontodactylus havanensis*, *Pseudosquilla megalopthalma*, *Lysiosquilla biminiensis*, *Squilla quadridens*, *S. polita*, *S. parva*, *S. mantoidea*, *S. aculeata*, *S. panamensis*, *S. intermedia*, *S. biformis*, *S. alba*, *S. rugosa*.

148.

1895. GIESBRECHT, WILHELM. Reports on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, carried on by *Albatross*, during 1891. XVI. Die Pelagischen Copepoden.

Bull Mus. Comp. Zool. 1895, vol. 25, pp. 243–263, 4 pls.

The following genera and species are described as new: *Gaidius*, *Lopothrix*, *Gaidius pungens*, *Chirundina streetsii*, *Lopothrix frontalis*, *Centropages elegans*, *Euchœta tonsa*, *Scolecithrix cristata*, *S. persecans*, *Leuckartia grandis*, *Heterochœta tanneri*, *Pontella agassizii*.

149.

1895. FAXON, WALTER. Reports on an exploration off the west coasts of Mexico, Central and South America, and off the Galapagos Islands, by the steamer *Albatross*, during 1891. XV. The Stalk-eyed Crustacea.

Mem. Mus. Comp. Zool. 1895, vol. 18, pp. 1–292, 67 pls.

A systematic account of the species with special chapters on distribution, colors, bathymetric range, etc. Many of the plates are colored.

150.

1895. MULLER, G. W. Reports on the dredging operations off the west coast of Central America, to the Galapagos, to west coast of Mexico, and in the Gulf of California, carried on by U. S. F. C. steamer *Albatross*, during 1891. XIX. Die Ostracoden.

Bull. Mus. Comp. Zool. 1895, vol. 27, pp. 153–170, 3 pls.

The genus *Gigantocypris* and species *Gigantocypris pellucida*, *Conchœcia agassizii* described as new.

151.

1895. HARTLAUB, C. Reports on the dredging operations off the west coast of Central America, to the Galapagos, to the west coast of Mexico, and in the Gulf of California, carried on by the steamer *Albatross*, during 1891. XVIII. Die Comatuliden.

Bull. Mus. Comp. Zool. 1895, vol. 27, pp. 137–152, 4 pls.

The new species described are as follows: *Antedon agassizii*, *A. tanneri*, *A. parvula*, *A. brigadata*, *A. subtilis*.

152.

1895. TOWNSEND, C. H. Reports on the dredging operations off the west coast of Central America, to the Galapagos, to the west coast of Mexico, and in the Gulf of California, carried on by the U. S. F. C. steamer *Albatross*, during 1891. XVII. Birds from Cocos and Malpelo islands, with notes on petrels obtained at sea.

Bull. Mus. Comp. Zool. 1895, vol. 27, pp. 121–126, 2 pls.

The ornithological relationship of Cocos Island with the Galapagos and with the mainland is referred to. Eleven species are considered, and the following genera and species from Cocos Island are described as new; *Cocornis agassizi*, *Nesotriccus ridgwayi*.

152a.

1895. Fur Seal Arbitration. Proceedings of the Tribunal of Arbitration convened at Paris.

Sen. Ex. Doc. 177, 53d Cong., 2d sess., 15 vols.

Contains much matter based on *Albatross* investigations.

153.

1895. RATHBUN, MARY J. Descriptions of a new genus and four new species of crabs from the Antillean region.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 83–86.

Three species based on *Albatross* collections. The following are described as new: *Thyrolambrus*, *Thyrolambrus astroides*, *Solenolambrus decemspinosus*, *Pilumnus diomedeæ*, *Actæa palmeri*.

154.

1895. RATHBUN, MARY J. Notes on the crabs of the family Inachidæ in the U. S. National Museum.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 43–75, 1 pl.

Based largely on *Albatross* dredgings. New genera and species described: *Holoplites*, *Echinœcus*, *Achœus tritubercularus*, *Podichela spinifrons*, *Collodes leptocheles*, *Batrachonotus brasiliensis*, *B. nicholsi*, *Inachoides intermedius*, *Anasimus latus*, *Echinœcus pentagonus*.

155.

1895. RATHBUN, MARY J. The genus Callinectes.

Proc. U. S. Nat. Mus. 1895, vol. 18, pp. 349–375.

Based partly on *Albatross* collections. *Callinectes sapidus acutidens* described as new.

156.

1895. VERRILL, A. E. Descriptions of new species of starfishes and Ophiurans, with a revision of certain species formerly described; mostly from collections made by the U. S. Commission of Fish and Fisheries.

Proc. U. S. Nat. Mus. 1894, vol. 17, pp. 245–297.

Based chiefly on *Albatross* dredgings. New genera and species: *Isaster*, *Acantharchaster*, *Pseudarchaster concinnus*, *Isaster bairdii*, *Pentagonaster eximius*, *Neomorphaster forcipatus*, *Solaster syrtensis*, *S. benedicti*, *Crossaster helianthus*, *Pteraster hexactis*, *Cribrella pectinata*, *Brisinga multicostata*, *Freyella aspera*, *F. microspina*, *Ophioglypha saurura*, *O. tessellata*, *O. grandis*, *Astroschema clavigera*.

157.

1895. VERRILL, A. E. Distribution of the Echinoderms of Northeastern America. [Brief contributions to zoology from museum of Yale College, No. LVIII.]

Am. Jour. Sci. 1895, Third Series, vol. 49, No. 290, Feb., pp. 127–141. (Abstract of a paper read before the National Academy of Science, Dec. 31, 1894.)

The same (continuation).

Am. Jour. Sci., Third Series, vol. 49, No. 291, Mar., 1895, pp. 199–212.

Based in part on *Albatross* dredgings. Contains notes on bathymetric distribution. The genus *Lophopteraster* and the following species described as new: *Pentagonaster simplex*, *P. planus*, *Porania insignis*, *Rhegaster abyssicola*, *Lophopteraster abyssorum*, *Hymenaster regalis*, *Asterias enopla*, *A. austera*, *Leptasterias hispidella*.

158.

1895. VERRILL, A. E. Supplement to the Marine Nemerteans and Planarians of New England.

Trans. Conn. Acad. of Arts and Sciences 1895, vol. 9, pp. 523–534.

An annotated list, *Micrura cœca* described as a new species.

159.

1896. TANNER, Z. L., and F. J. DRAKE. Report upon the operations of the U. S. F. C. steamer *Albatross* for the year ending June 30, 1894.

Rep. U. S. F. C. 1894, part 20, pp. 197–278, 2 pls., cht.

Fur-seal investigations at Pribilof Islands: fishery investigations and the patrol of Bering Sea; fishery investigations in Puget Sound and off southern California; report of fishery expert; tabular records of hydrographic and other operations.

160.

1896. DRAKE, F. J., Lieut. Commander U. S. N. Report upon the investigations of the steamer *Albatross* for the year ending June 30, 1895. (Abstract.)

Rep. U. S. F. C. 1895, part 21, pp. 125–168.

General contents: Fur-seal investigations at Pribilof and Commander islands; pelagic sealing investigations and patrol of Bering Sea; report of fishery expert; records of operations.

161.

1896. DALL, W. H. Insular land-shell faunas, especially as illustrated by the data obtained by Dr. G. Baur in the Galapagos Islands.

Proc. Acad. Nat. Sci. Phil. 1896, Aug., pp. 395–459, 3 pls.

Based in part on *Albatross* collections. The following species are described as new: *Bulimulus nesioticus*, *B.* sp.

162.

1896. JORDAN, DAVID STARR, et al. Observations on the fur seals of the Pribilof Islands. Preliminary Report.

Treas. Dept. Doc. No. 1913, 69 pp., chart.

A preliminary report by the commission of investigation into the condition of the fur-seal fisheries. See Nos. 186, 187. The *Albatross* was detailed for this work.

163.

1896–1900. JORDAN, DAVID STARR, and BARTON WARREN EVERMANN. Fishes of North and Middle America. A descriptive catalogue of the species of fish-like vertebrates found in the waters of North America north of the Isthmus of Panama.

Bull. 47, U. S. Nat. Mus., Parts I–IV, lviii+3313 pp., 392 pls.

The most valuable representation of our knowledge of the fauna in question. Contains descriptions of nearly all fishes brought to light by the investigations of the steamship *Albatross*. Genera and species from *Albatross* collections here described as new are as follows: *Palometa*, *Enneistus*, *Xystroperca*, *Alcidea*, *Archistes*, *Stelgistrum*, *Sternias*, *Oxycottus*, *Nautiscus*, *Bryssophilus*, *Embryx*, *Albatrossia*, *Bogoslovius*, *Verasper*, *Ramularia*, *Perissias*, *Crystallichthys*, *Prognurus*, *Leuresthes crameri*, *Mugil thoburni*, *Archistes plumarius*, *Radulinus boleoides*, *Stelgistrum stejnegeri*, *Nautiscus pribilovius*, *Podothecus hamlini*, *P. thompsoni*, *Averruncus sterletus*, *Gnathypops snyderi*, *Hippoglossoides hamiltoni*, *Verasper moseri*, *Osmerus albatrossis*, *Bathylagus milleri*, *Oligoplites mundus*, *Crystallichthys mirabilis*, *Prognurus cypselurus*, *Larimus acclivus*, *Iridio kirschii*, *Sebastodes aleutianus*.

164.

1896. TOWNSEND, C. H., F. W. TRUE, and A. B. ALEXANDER. Reports of agents, officers, and persons acting under the authority of the Secretary of the Treasury in relation to the condition of seal life on the rookeries of the Pribilof Islands, and to pelagic sealing in Bering Sea and the North Pacific Ocean, 1883–1895. Part II.—Condition of seal life on the rookeries of the Pribilof Islands, 1893–1895.

Senate Doc. No. 137, part 2, 54th Cong., 1st sess., 154 pp., 19 pls., 11 charts; atlas of 46 pls.

Reports on fur-seal fisheries, made in connection with the work of the steamship *Albatross*.

165.

1896. VERRILL, A. E. The Opisthoteuthidæ, a remarkable new family of deep-sea Cephalopoda, with remarks on some points in molluscan morphology.

Am. Jour. Sci. 1896, fourth series, vol. 2, No. 7—July, pp. 74–80, 7 figs.

A second specimen of *Opisthoteuthis agassizii* noted as dredged by the *Albatross*.

166.

1896. DALL, W. H. Diagnoses of new species of Mollusks from the west coast of America.

Proc. U. S. Nat. Mus. 1895, vol. 18, pp. 7–20.

Based on *Albatross* collections. New species here described: *Calliostoma iridium*, *C. turbinum*, *Anaplocamus borealis*, *Solariella nuda*, *S. ceratophora*, *Rimula expansa*, *Emarginula flabellum*, *Choristes carpenteri*, *Benthodolium pacificum*, *Phos cocosensis*, *Cominella brunneocincta*, *Fusus rufocaudatus*, *Tractolira sparta*, *Scaphella benthalis*, *Cancellaria centrota*, *C. io*, *Pleurotoma aulaca*, *Pleurotomella castanea*, *Nucula iphigenia*, *Limopsis compressus*, *Philobrya atlantica*, *Callocardia lepta*, *C. ovalis*, *C. gigas*, *Callogonia angulata*, *Periploma stearnsii*, *P. carpenteri*.

167.

1896. GOES, AXEL. Reports on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of

167.

1896. GOES, AXEL—Continued. Mexico, and in the Gulf of California, carried on by the U. S. F. C. steamer *Albatross*, during 1891. XX. The Foraminifera.

Bull. Mus. Comp. Zool. 1896, vol. 29, pp. 1–103, 9 pls.

An annotated catalogue, with synonymy and descriptions of new species; a list of stations; a table showing bathymetric distribution and a comparison of the faunas on both sides of the Isthmus of Panama. The following are described as new: *Astrorhiza furcata, A. tenuis, A. vermiformis, Crithionina pisum, C. rugosa, C. lens, C. granum subsimplex, Thurammina erinacea, Reophax insectus, R. armatus, R. turbo, Haplophragmium helicoideum, H. obsoletum, H. lituolinoideum, Verneuilina pusilla, Textularia solita inflata.*

168.

1896. TOWNSEND, C. H. Description of a closing tow net for submarine use at all depths.

Rept. U. S. F. C. 1894, part 20, pp. 279–282, 2 pls.

A new and simple form of towing net for exploring at intermediate depths, the jaws of the net closing by means of a messenger.

168a.

1896. ELLIOTT, D. G. Descriptions of an apparently new species and subspecies of ptarmigan from the Aleutian Islands.

The Auk, vol. 13, pp. 24–29, 1 pl.

Based chiefly on *Albatross* collections. *Lagopus evermanni* and *L. rupestris townsendi* described as new.

169.

1897. TANNER, Z. L., Commander, U. S. Navy. Deep-sea exploration: A general description of the steamer *Albatross*, her appliances and methods.

Bull. U. S. F. C. 1896, vol. 16, pp. 257–424, 40 pls., 76 figs.

A valuable work, describing in detail the methods of operating the many appliances used in connection with deep-sea investigations. Contains chapters on the construction of the vessel, deep-sea sounding, thermometers, density of sea water, development of deep-sea exploration, navigation, the conduct of deep-sea work, marine deposits, preservation of collections, etc.

170.

1897. GILBERT, C. H., and FRANK CRAMER. Report on the fishes dredged in deep water near the Hawaiian Islands, with descriptions and figures of 23 new species.

Proc. U. S. Nat. Mus. 1896, vol. 19, pp. 403–435.

Includes a description of the remarkable genus *Pelecanichthys*. New genera and species: *Argyripnus, Cœlocephalus, Pelecanichthys, Promyllantor alcocki, Congermurœna æquorea, Chlorophthalmus proridens, Diaphus urolampus, D. chrysorhynchus. Myctophum fibulatum, Dasyscopelus pristilepis, Argyripnus ephippiatus, Melanostoma argyreum, Scorpœna remigera, Peristedion hians, Cœlorhynchus gladius, Macrourus ectenes, M. propinquus, M. holocentrus, M. gibber, Hymenocephalus antrœus, Trachonurus sentipellis, Chalinura ctenomelas, Optonurus atherodon, Pelecanichthys crumenalis, Malthopsis mitriger, Cœlocephalus acipenserinus.*

171.

1897. GILBERT, CHARLES HENRY. Descriptions of 22 new species of fishes collected by the steamer *Albatross*.

Proc. U. S. Nat. Mus. 1896, vol. 19, pp. 437–457

Collections from the North Pacific Ocean between Panama and California. One species from Brazil. New genera and species: *Emmnion, Ulvicola, Tachysurus liropus, Netuma insularum, Mugil thoburni, Myripristis clarionensis, Epinephelus niphobles, Orthopristis forbesi, Ophioscion strabo, Holacanthus iodocus, Scorpœna pannosa, Sebastodes semicinctus, S. ayresii, S. crameri, Prionotus loxias, Astroscopus zephyrius, Emblemaria oculocirris, Lepidion verecundum, Paralichthys woolmani, Emmnion bristolæ, Leuresthes crameri, Centropomus constantinus, Ulvicola sanctæ-rosæ.*

172.

1897. BENEDICT, JAMES E. A revision of the genus Synidotea.

Proc. Acad. Nat. Sci. Phil. 1897, pp. 389–404, 13 cuts.

Based in part on *Albatross* collections. Contains an analytical key to species. The following are described as new: *Synidotea laticauda, S. nebulosa, S. angulata, S. pallida, S. erosa, S. lævis, S. picta.*

173.

1897. RICHARDSON, HARRIET. Description of a new genus and species of Sphæromidæ from Alaskan waters.

Proc. Biol. Soc. Wash. 1897, vol. 11, pp. 181-183.

Tecticeps alascensis, from *Albatross* collections, is described as new.

174.

1897. DALL, W. H. Notice of some new or interesting species of shells from British Columbia and the adjacent region.

Nat. Hist. Soc. B. C., Bull. No. 2, pp. 1-18, pl. 1-2.

Based in part on *Albatross* collections. The following described as new: *Crenella columbiana, C. leana, C. japonica, Modiolaria taylori, M. seminuda, Nucula carlottensis, Leda extenuata, Yoldia ensifera, Y. martyria, Malletia faba, M. gibbsii, M. pacifica, M. kennerlyi, Macoma inflatula, M. liotricha, Cadulus hepburni, C. tolmiei, Cythara victoriana, Mumiola tenuis, Rissoina newcombei, Molleria quadræ, Eucosmia lurida.*

175.

1897. MERRIAM, C. HART. A new fur seal or sea bear (*Arctocephalus townsendi*) from Guadalupe Island, off Lower California.

Proc. Biol. Soc. Wash. 1897, vol. 11, pp. 175-178.

This paper is based on collections and notes made by the resident naturalist of the *Albatross*, on a side trip, during the detail of the vessel for investigations of the seal fisheries.

176.

1897. GILL, THEO., and C. H. TOWNSEND. Diagnoses of new species of fishes found in Bering Sea.

Proc. Biol. Soc. Wash. 1897, vol. 11, pp. 231-234.

Descriptions of 14 new species and 1 new genus of fishes obtained by Mr. Townsend as naturalist of the *Albatross* in 1895. The new species are *Raia rosispinis, R. obtusa, R. interrupta, Macdonaldia alta, M. longa, Ericara salmonea, Lycodes digitatus, L. concolor, Macrurus lepturus, M. dorsalis, M. firmisquamis, M. magnus, M. suborbitalis, Hippoglossoides robustus.* The new genus described is *Ericara* of Alepocephalidæ.

177.

1897. VERRILL, A. E., and KATHARINE J. BUSH. Revision of the genera of Ledidæ and Nuculidæ of the Atlantic coast of the United States. [Brief contributions to zoology from the museum of Yale University, No. L.]

Am. Jour. Sci. 1891, 4th series, vol. 3, No. 13, Jan., pp. 51-63, 21 figs.

Based in part on *Albatross* collections. The new genera and species described are *Ledella, Megayoldia, Orthoyoldia, Yoldiella, Microyoldia, Tindariopsis; Ledella parva, Yoldiella inflata, Neilonella subovata, Tindaria callistiformis.*

178.

1897. RIDGWAY, ROBERT. Birds of the Galapagos Archipelago.

Proc. U. S. Nat. Mus. 1896, vol. 19, pp. 459-670.

Embodies practically all that is known of the avifauna of the Galapagos. Contains analytical keys, lists of species known to each island of the archipelago, maps showing distribution of species, bibliography, etc.

179.

1897. MAAS, OTTO. Reports on an exploration off the west coasts of Mexico, Central and South America, and off the Galapagos Islands, by the *Albatross*, in 1891. XXI. Die Medusen.

Mem. Mus. Comp. Zool. 1897, vol. 32, pp. 7-92, 14 pls., 1 map.

A systematic arrangement of the species, with notes. The genus *Chiarella* and the following species are described as new: *Stomotoca divisa, Chiarella centripetalis, Melicertum proboscifer, Homœonema typicum, Aglaura prismatica, Atolla gigantea, A. alexandri, Charybdea arborifera, Nauphanta albatrossi.*

180.

1897. HANSEN, H. J. Reports on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, carried on by the U. S. F. C. steamer *Albatross*, during 1891. XXII. The Isopoda.

Bull. Mus. Comp. Zool. 1897, vol. 31, pp. 93-130, 6 pls., chart.

The following genera and species are described as new: *Cryptione, Munidion,*

180.

1897. HANSEN, H. J.—Continued.

Parargeia, Bathygyge; Eurycope pulchra, E. scabra, Æga maxima, A. acuminata, A. plebeia, A. longicornis, Rocinela laticauda, R. modesta, Irona foveolata, Cryptione elongata, Munidion princeps, Pseudione galacanthæ, Parargeia ornata, Bathygyge grandis.

181.

1897. RATHBUN, MARY J. Synopsis of the American species of Ethusa, with description of a new species.

Proc. Biol. Soc. Wash. 1897, vol. 11, pp. 109–110.

Ethusa tenuipes is described as new.

182.

1897. RATHBUN, MARY J. Synopsis of the American species of *Palicus* Philippi (= *Cymopolia roux*), with descriptions of six new species.

Proc. Biol. Soc. Wash. 1897, vol. 11, pp. 93–99.

Based partly on *Albatross* collections. New species described: *Palicus alternatus, P. faxoni, P. isthmius, P. angustus, P. depressus, P. bahamensis.*

183.

1898. AGASSIZ, A. Reports on dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, carried on by the steamer *Albatross* during 1891. XXIII. Preliminary report on the Echini.

Bull. Mus. Comp. Zool. 1898, vol. 32, pp. 69–86, 13 pls., chart.

The following new genera and species are described: *Dialithocidaris, Dermatodiadema, Plexechinus, Phrissocystis, Spatagodesma; Dorocidaris panamensis, Goniocidaris doederleini, Porocidaris milleri, P. cobosi, Salenia miliaris, Dialithocidaris gemmifera, Dermatodiadema globulosum, D. horridum, Phormosoma panamensis, P. hispidum, Pourtalesia tanneri, Plexechinus cinctus, Echinocrepis setigera, Urechinus giganteus, Cystechinus loveni, C. rathbuni, Phrissocystis aculeata, Homolampas hastata, Aerope fulva, Schizaster latifrons, S. townsendi, Periaster tenuis, Brissopsis columbaris, Toxobrissus pacificus.*

184.

1898. BENEDICT, JAMES E. The Arcturidæ in the U. S. Nat. Mus.

Proc. Biol. Soc. Wash., vol. 12, pp. 41–51.

Based in part on *Albatross* collections. The following species are described as new: *Arcturus longispinis, A. glabrus, A. beringanus, A. tenuispinis, A. multispinis, A. murdochi, Astacilla diomedeæ, A. cæca.*

185.

1898. DRAKE, F. J. Records of observations made on board the U. S. F. C. steamer *Albatross* during the year ending June 30, 1896.

Rep. U. S. F. C. 1896, part 22, pp. 357–386.

An abstract from the report of the commanding officer. General contents: Fur-seal investigations at Pribilof and Commander islands; pelagic sealing inquiries and patrol of Bering Sea; fishery investigations in Puget Sound and off southern California; tabular records of dredging and other operations.

186.

1898. JORDAN, DAVID STARR, et al. Second preliminary report of the Bering Sea fur-seal investigations, 1897.

Treas. Dept. Doc. No. 1994, 48 pp.

A preliminary report. See No. 187. The *Albatross* was detailed for these investigations.

187.

1898–99. JORDAN, DAVID STARR, et al. The fur seals and fur-seal islands of the North Pacific Ocean. By D. S. Jordan, with the following official associates: Leonhard Stejneger, Frederic A. Lucas, Jefferson F. Moser, C. H. Townsend, G. A. Clark, Joseph Murray.

Treas. Dept. Doc. No. 2017, pts. 1 to 4; many illustrations; charts.

The report of an inquiry into the condition and needs of the fur-seal herds of North Pacific Ocean and Bering Sea. An exhaustive study of the fur seals and fur-seal fisheries. Part 3 contains many special papers on natural history, based on the investigations of the *Albatross*, which was detailed for the use of the commission. Those in which new marine species are described are:

The species of Callorhinus. By D. S.

187.

1898–99. JORDAN, DAVID S.—Cont'd.

Jordan and G. A. Clark. *C. alascanus* and *C. curilensis* are described as new.

Tunicates of the Pribilof Islands. By W. E. Ritter. New species: *Styela greeleyi, Dendrodoa tuberculata, D. subpedunculata, Polyclinum globosum, P. pannosum, Aplidiopsis jordani, Amaroucium kincaidi, A. pribilovense, A. snodgrassi, Synoicum irregulare.*

List of crustacea known to occur on or near the Pribilof Islands. By M. J. Rathbun. New species: *Crangon communis, Nectocrangon crassa, Spirontocaris barbata, S. avina.*

The fishes of Bering Sea. By D. S. Jordan and C. H. Gilbert. New genera and species: *Archistes, Stelgistrum, Crystallichthys, Prognurus, Verasper, Osmerus albatrossis, Therobromus callorhini, Sebastodes aleutianus, Archistes plumarius, Stelgistrum steinegeri, Ceratocottus lucasi, Myoxocephalus mednius, Nautiscus pribilovius, Podothecus hamlini, P. thompsoni, Crystallichthys mirabilis, Prognurus cypselurus, Bogoslovius clarki, Hippoglossoides hamiltoni, Verasper moseri.*

188.

1898. RATHBUN, MARY J. The Brachyura of the biological expedition to the Florida Keys and the Bahamas in 1893.

Bull. Lab. Nat. Hist. Univ. of Iowa, vol. 4, pp. 250–294, pls. 1–9.

Based in part on *Albatross* collections. The following genera and species are described as new: *Lophopanopeus, Eupanopeus, Tetraxanthus, Chasmocarcinus, Collodes armatus, Actæa bifrons, Pilumnus spinosissimus, P. andrewsii, P. holosericus, Xanthias nuttingi, Micropanope truncatifrons, Hypopeltarium dextrum, Trachycarcinus spinulifer, Pilumnoplax americanus, Chasmocarcinus typicus, C. obliquus, Frevillea quadridentata, Calappa sulcata, Spelœophorus elevatus, Iliacantha liodactylus, Cyclodorippe granulata.*

189.

1898. VERRILL, ADDISON E., and KATHARINE J. BUSH. Revision of the deep-water Mollusca of the Atlantic coast of North America, with descriptions of new genera and species. Part I. Bivalvia.

Proc. U. S. Nat. Mus., vol. 20, pp. 775–901.

Based largely on *Albatross* dredgings. The following described as new: *Kelli-*

189.

1898. VERRILL, ADDISON E., and KATHARINE J. BUSH—Continued.

opsis, Axinulus, Axinodon, Leptaxinus, Martesia fragilis, Abra longicallis americana, Montacuta bidentata tenuis, M. striatula, M. casta, M. cuneata, M. triquetra, M. bidentata fragilis, Cryptodon insignis, C. croulinensis altus, C. equalis, C. planus, C. obsoletus, C. brevis, C. inequalis, C. simplex, C. pygmœus, C. ovatus, Axinopsis cordata, A. orbiculata inequalis, Axinodon ellipticus, Leptaxinus minutus, Cuspidaria turgida, C. media, C. parva, C. ventricosa, C. formosa, C. fraterna, Cardiomya abyssicola, C. gemma, Halonympha striatella, Myonera pretiosa, Cetoconcha atypha, Lyonsiella cordata, Lyonsia granulifera, Cliodophora inornata, Kennerlia brevis, Periploma affinis, Limatula regularis, L. nodulosa, L. hyalina, Bathyarca abyssorum, B. anomala, Limopsis sulcata, L. profundicola, Nucula subovata, Yoldia casta, Yoldiella iris, Y. subangulata, Y. fraterna, Y. curta, Y. pachia, Y. inconspicua, Y. lenticula amblia, Y. minuscula, Y. dissimilis, Malletia abyssorum, M. polita, Tindaria lata, Solemya grandis, Ledella messanensis sublevis.

190.

1898. MOSER, J. F., Lieut. Comdr. U. S. N. Report on the work of the steamer *Albatross* (abstract).

Rep. U. S. F. C. 1897, part 23, pp. CXLVII–CLXXI.

An abstract from report of commanding officer. Voyage to Pribilof, Commander, Kuril, and Robben islands, with fur-seal investigation commission, returning via Japan and Hawaiian Islands; fishery investigations off southern California; notes on results of dredge hauls; tabular records of dredging, and other operations.

191.

1898. MARK, E. L. Reports on the dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, carried on by the U. S. F. C. steamer *Albatross*, during 1891. XXIV.—Preliminary report on Branchiocerianthus urceolus, a new type of Actinian.

Bull. Mus. Comp. Zool. 1890, vol. 32, pp. 147–154, 3 pls.

192.

1898. RICHARDSON, HARRIET. Description of a new parasitic Isopod of the genus Ægа, from the southern coast of the United States.

Proc. Biol. Soc. Wash. 1898, vol. 12, pp. 39-40.

Ægа ecarinata from *Albatross* dredging is described as new.

193.

1899. FLINT, JAMES M. Recent Foraminifera. A descriptive catalogue of specimens dredged by the U. S. F. C. steamer *Albatross*.

Ann. Rep. Smith. Institution 1897; Rep. U. S. Nat. Mus., Part I, pp. 249-350, 80 pls.

A systematic discussion of the species, with analytical keys. Contains chapter on the structure and character of the Foraminifera. The following are described as new species: *Crithionina pisum hispida, Psammosphæra fusca testacea, Saccammina consociata, Reophax difflugiformis testacea, R. bilocularis, Thurammina favosa, T. cariosa, Biloculina dehiscens, Miliolina angularis, Peneroplis pertusus discoideus, Lagena castanea, Cristellaria limbata, Ramulina proteiformis.*

194.

1899. DALL, W. H. Synopsis of the American species of the family Diplodontidæ.

Jour. of Conch. (Brit.), Oct., pp. 244-246.

Diplodonta platensis from *Albatross* collections is described as new.

195.

1899. DALL, WILLIAM H. Synopsis of the recent and Tertiary Leptonacea of North America and the West Indies.

Proc. U. S. Nat. Mus., vol. 21, pp. 874-897, 2 pls.

Based in part on *Albatross* collections. The following species are described as new: *Sportella pilsbryi, S. californica, S. stearnsii, Anisodonta corbuloidea, Erycina linella, E. emmonsi, E. periscopiana, E. fernandina, E. compressa, Bornia barbadensis, B. retifera, Mysella barbadensis, M. aleutica, M. pedroana, Montacuta floridana, M. minuscula, M. limpida, M. percompressa.*

196.

1899. BUSH, KATHERINE J. Revision of the marine Gastropods referred to Cyclostrema, Adeorbis, Vitrinella, and related genera, with descriptions of some new genera and species belonging to the Atlantic fauna of America.

Trans. Conn. Acad. Arts and Sciences 1899, vol. 10, pp. 97-143.

Based in part on *Albatross* collections. New genera and species described are as follows: *Lissospira, Leptogyra, Möllerіopsis, Choristella, Cyclostremella, Pseudorotella minuscula, Vitrinella tryoni, Circulus dalli, Lissospira striata, L. (?) convexa, L. (Ganesa) abyssicola, L. (Ganesa?) rarinota, Granigyra spinulosa, Leptogyra verrilli, L. inconspicua, L. eritmeta, Möllerіopsis abyssicola, Choristella leptalea, C. brychia, Cyclostremella humilis.*

197.

1899. LÜTKEN, C. F., and TH. MORTENSEN. Reports of an exploration off the west coasts of Mexico, Central and South America, and off the Galapagos Islands, in charge of Alexander Agassiz, by the steamer *Albatross*, during 1891. XXV.—The Ophiuridæ.

Mems. Mus. Comp. Zool. 1899, vol. 23, pp. 93-208, 22 pls., chart.

Contains a systematic account of the species, bibliography, etc. The genus *Gymnophiura* and the following species are described as new: *Ophiozona contigua, O. alba, Ophiernus seminudus, O. annectens, O. polyporus, Gymnophiura mollis, G. cœrulescens, Ophioglypha superba, O. abcisa, O. obtecta, O. tumulosa, O. plana, O. scutellata, O. nana, O. divisa, Ophiocten pacificum, Ophiomusium glabrum, O. diomedeæ, O. variabile, Ophiactis profundi, Amphiura serpentina, A. gymnogastra, A. polyacantha, A. seminuda, A. brevipes, A. gymnopora, A. diomedeæ, A. assimilis, A. granulata, A. gastracantha, A. notacantha, A. papillata, Ophionereis nuda, Ophiochiton carinatus, Ophiacantha pacifica, O. inconspicua, O. spinifera, O. mouliformis, O. costata, O. contigua, O. hirta, O. paucispina, Ophiomitra granifera, O. partita, O. lævis, Ophiothrix galapagensis, Ophiomyxa panamensis, Sigsbeia lineata, Asteronyx dispar, A. excavata, A. plana, Astroschema sublæve, Gorgonocephalus diomedeæ.*

198.

1899. GARMAN, S. Reports of an exploration off the west coasts of Mexico, Central and South America, and off the Galapagos Islands, in charge of Alexander Agassiz, by the *Albatross* during 1891. XXVI. The Fishes.

Mems. Mus. Comp. Zool. 1899, vol. 24, 431 pp., 97 pls., chart.

An important report with a separate volume of plates, many of which are colored. Contains a general discussion of deep-sea fishes, special discussions and descriptions, chapters on lateral canal system, distribution of genera, lists of species and stations, bibliography, etc. New genera and species described are as follows: *Centristhmus*, *Leucicorus*, *Bothrocaropsis*, *Ectreposebastes*, *Dolopicthhys*, *Dibranchopsis*, *Dibranchichthys*, *Eretmichthys*, *Monomeropus*, *Pseudonus*, *Holcomycteronus*, *Sciadonus*, *Microlepidium*, *Leptophycis*, *Lychnopoles*, *Dactylostomias*, *Leptochilichthys*, *Congrosoma*, *Halieutopsis*, *Raja badia*, *Centroscyllium nigrum*, *Liopropoma longilepis*, *Centristhmus signifer*, *Pontinus furcirhinus*, *Ectreposebastes imus*, *Hoplostethus pacificus*, *Trachichthys mento*, *Caulolepis subulidens*, *Melamphaes nigrofulvus*, *M. maxillaris*, *M. frontosus*, *Trichiurus nitens*, *Teuthis elegans*, *Chiasmodon subniger*, *Lophiomus spilurus*, *L. caulinaris*, *Dolopichthys allector*, *Chaunax coloratus*, *Oncocephalus porrectus*, *Halieutopsis tumifrons*, *Dibranchus hystrix*, *D. scaber*, *D. asper*, *Dibranchichthys nudivomer*, *Malthopsis sparsa*. *M. erinacea*, *M. spinosa*, *M. spinulosa*, *Prionotus frontalis*, *Peristedium barbiger*, *P. crustosum*, *Paraliparis grandiceps*, *P. attenuatus*, *P. angustifrons*, *P. latifrons*, *Callionymus atrilabiatus*, *Entomacrodus cruentatus*, *Bothrocaropsis alalonga*, *B. rictolata*, *B. elongata*, *Gymnelis conorhynchus*, *Lycodopsis scaurus*, *Lycodes anguis*, *L. serpens*, *L. incisus*, *L. cicatrifer*, *Phucocœtes suspectus*, *Maynea bulbiceps*, *Leucicorus lusciosus*, *Mixonus caudalis*, *Dicrolene filamentosa*, *D. nigra*, *D. pullata*, *Porogadus longiceps*, *P. atripectus*, *P. breviceps*, *Monomitopus torvus*, *Monomeropus malispinosus*, *Bassozetus nasus*, *Diplacanthopoma jordani*, *Holcomycteronus digittatus*, *Eretmichthys pinnatus*, *E. ocella*, *Catœtyx simus*, *Pseudonus acutus*, *Acanthonus spinifer*, *Sciadonus pedicellaris*, *Lamprogrammus illustris*, *Microlepidium grandiceps*, *Leptophycis filifer*, *Merluccius angustimanus*, *Antimora rhina*. *Lœmonema gracillipes*, *Physiculus longipes*, *P. rastrelliger*, *Bregmaceros longipes*, *Macrurus bulbiceps*, *M. bucephalus*, *M. liraticeps*, *M. barbiger*, *M. capito*, *M. leucophœus*, *M. boops*, *M. fragilis*, *M. carminifer*, *M. convergens*, *M. orbitalis*, *M. loricatus*, *M. cuspidatus*, *M. gracillicauda*, *M. latirostratus*, *M. anguliceps*, *M. latinasutus*, *M. trichiurus*, *M. tenuicauda*. *M. canus*, *Hippoglossina vagrans*, *Citharichthys maculifer*, *Monolene maculipinna*, *M. dubiosa*, *Symphurus varius*, *S. microlepis*, *Sternoptyx obscura*, *Argyropelecus lychnus*, *A. caninus*, *A. affinis*, *Polyipnus laternatus*, *Valenciennellus stellatus*, *Maurolicus oculatus*, *M. lucetius*, *Lychnopoles argenteolus*, *Cyclothone signata*, *C. acclinidens*, *Synodus simulans*, *S. acutus*, *Chlorophthalmus mento*, *Scopelengys dispar*, *Bathypterois ventralis*, *B. pectoralis*, *Ipnops agassizii*, *Myctophum oculeum*, *M. tenuiculum*, *M. luminosum*, *M. aurolaternatum*, *M. nitidulum*, *M. laternatum*, *M. atratum*, *Chauliodus barbatus*, *C. dentatus*, *Stomias colubrinus*, *S. hexagonatus*, *S. atriventer*, *Dactylostomias filifer*, *Leptochilichthys agassizi*, *Bathytroctes alvifrons*, *B. alveatus*, *B. inspector*, *Narcetes pluriserialis*, *Alepocephalus convexifrons*, *A. asperifrons*, *A. fundulus*, *Halosaurus attenuatus*, *H. radiatus*, *Notacanthus spinosus*, *Uroconger varidens*, *Congermurœna caudalis*, *Congrosoma evermanni*. *Ophichthys frontalis*, *O. biserialis*, *Echidna cocosa*, *E. scabra*, *Xenomystax rictus*, *Chlopsis gilbertii*, *Venefica ocella*, *V. tentaculata*, *Serrivomer sector*, *Labichthys bowersii*, *Nemichthys fronto*, *Atopichthys esunculus*, *A. sicarius*, *A. cinctus*, *A. dentatus*, *A. falcidens*, *A. acus*, *A. ophichthys*, *A. cingulus*, *A. lychnus*, *A. obtusus*, *A. longidens*, *Myxine circifrons*, *M. tridentiger*, *M. acutifrons*.

199.

1899. BEAN, BARTON A. Notes on the capture of rare fishes.

Proc. U. S. Nat. Mus., vol. 21, pp. 639, 640.

This paper contains a reference to the capture by the *Albatross* of a second specimen of *Caulolepis longidens*.

200.

1899. RATHBUN, MARY J. The Brachyura collected by the U. S. F. C. steamer *Albatross* on the voyage from Norfolk, Va., to San Francisco, Cal., 1887–88.

Proc. U. S. Nat. Mus., vol. 21, pp. 567–616.

200.

1899. RATHBUN, MARY J.—Continued.

Descriptions of 4 new genera and 31 new species: *Lipœsthesius*, *Ectœsthesius*, *Ovalipes*, *Tetrias*, *Collodes tumidus*, *Anamathia cornuta*, *Hemus analogus*, *Lissa tuberosa*, *L. aurivilliusi*, *Microphrys branchialis*, *Thyrolambrus erosus*, *Actœa angusta*, *A. inornata*, *Medœus lobipes*, *Lipœsthesius leeanus*, *Pilumnus spinulifer*, *Micropanope nitida*, *M. areolata*, *Lophopanopeus maculatus*, *Ectœsthesius bifrons*, *Portunus angustus*, *P. minimus*, *Acanthocyclus hassleri*, *Palicus lucasii*, *Eucratopsis macrophthalma*, *Chasmocarcinus latipes*, *Pinnixa brevipollex*, *P. affinis*, *Tetrias scabripes*, *Calappa saussurei*, *Hepatus lineatus*, *Osachila levis*, *Ebalia cristata*, *Randallia bulligera*, *R. agaricias*.

201.

1899. STEJNEGER, LEONHARD. Birds of the Kuril Islands.

Proc. U. S. Nat. Mus., vol. 21, pp. 269–296.

A part of the material upon which this paper is based was collected during the writer's voyage among the Kurils on the steamship *Albatross*; *Cepphus snowi* is described as new.

202.

1899. RICHARDSON, HARRIET. Key to the Isopods of the Pacific coast of North America, with descriptions of 22 new species.

Proc. U. S. Nat. Mus., vol. 21, pp. 815–869.

Based in part on *Albatross* collections. New genera and species: *Colidotea*, *Eusymmerus*, *Tanais alascensis*, *Cirolana linguifrons*, *Eurydice caudata*, *Corallana truncata*, *Anilocra occidentalis*, *Dynamene dilatata*, *D. tuberculosa*, *D. benedicti*, *D. glabra*, *Sphœroma rhomburum*, *S. octoneum*, *Tecticeps convexus*, *Cilicœa cordata*, *C. caudata gilliana*, *C. granulosa*, *Cleantis occidentalis*, *C. heathii*, *Eusymmerus antennatus*, *Arcturus intermedius*, *Ianthe triangulata*, *I. erostrata*, *Jœropsis lobata*.

203.

1899. LINNELL, MARTIN E. On the Coleopterous insects of Galapagos Islands.

Proc. U. S. Nat. Mus., vol. 21, pp. 249–268.

Based largely on *Albatross* collections. The genus *Pseudoryctes* and the following species described as new: *Calosoma howardi*, *Scarites galopagoensis*, *Distichus smithi*, *Amphicerus frontalis*, *Achryson galapagoensis*, *Eburia lanigera*, *E. bauri*, *Acanthoderes galapagoensis*, *Stomion carinipenne*, *S. piceum*, *S. bauri*, *Ammophorus caroli*, *Pedonoeces bauri*, *Lobopoda galapagoensis*, *Oxacis galapagoensis*, *Pantomorus galapagoensis*.

203.

1899. LINNELL, MARTIN E.—Cont'd.

204.

1899. GILBERT, CHARLES H. Report on fishes obtained by the steamer *Albatross* in the vicinity of Santa Catalina Island and Monterey Bay.

Rep. U. S. F. C. 1898, part 24, pp. 25–29, 2 pls.

Collections from shore and dredging stations; the following species described as new: *Radulinus boleoides*, *Averruncus sterletus*.

205.

1899. GILBERT, CHARLES HENRY. On the occurrence of Caulolepis longidens Gill, on the coast of California.

Proc. U. S. Nat. Mus., vol. 21, pp. 565, 566.

The species was originally taken by the *Albatross* off the coast of New Jersey.

206.

1899. WOODWORTH, W. McM. Reports on the dredging operations off the west coast of Central America, to the Galapagos, to west coast of Mexico, and in the Gulf of California, carried on by the steamer *Albatross* during 1891. XXVII. Preliminary account of Planktonemertes agassizii, a new pelagic Nemertean.

Bull. Mus. Comp. Zool. 1899, vol. 35, pp. 1–4, 1 pl.

207.

1899. MOSER, Commander JEFFERSON F. The salmon and salmon fisheries of Alaska. Report of the operations of the *Albatross* for the year ending June 30, 1898.

Bull. U. S. F. C. 1898, part 18, pp. 1–178, 63 pls., 26 figs., cht.

An investigation of the condition and needs of the Alaskan salmon fishery;

207.

1899. MOSER, Commander JEFFERSON F.—Continued.

contains chapters on the salmon of Alaska, fishery and cannery methods, depletion of streams, statistics of salmon industry, etc.

208.

1899. SMITH, HUGH M. Exploring expedition to the mid-Pacific Ocean.

Science (U. S.), June 9, pp. 796-798.

An outline of the proposed voyage of the steamship *Albatross* under direction of Alexander Agassiz, with a list of officers.

209.

1899. SMITH, HUGH M. The deep-sea exploring expedition of the steamer *Albatross*.

Nat. Geog. Mag., vol. 10, No. 8, pp. 290-296, 3 ills.

An outline of the proposed voyage to the tropical Pacific under the direction of Alexander Agassiz.

210.

1899. VERRILL, A. E. Descriptions of imperfectly known and new Actinians, with critical notes on other species. III. [Brief Contributions to Zoology from the Museum of Yale College, No. LX.]

Am. Jour. Sci., fourth series, vol. 7, 1899, pp. 143-146, 20 figs.

Raphactis nitida, from *Albatross* dredgings, is described as new genus and species.

211.

1899. VERRILL, A. E. Revision of certain genera and species of starfishes, with descriptions of new forms.

Trans. Conn. Acad. Arts and Sciences 1899, vol. 10, pp. 145-234, 8 pls.

Based in part on *Albatross* collections. The new genera and species described are as follows: *Pyrenaster*, *Peltaster*, *Litonotaster*, *Eugoniaster*, *Antheniaster*, *Cladaster*, *Acodonaster*, *Prionaster*, *Sideriaster*, *Tosia* (*Plinthaster*) *compta*, *T.* (*Plinthaster*) *nitida*, *Peltaster hebes*, *Hippasteria caribœa*, *Cladaster rudis*, *Mediaster agassizii*, *Pseudarchaster* (?) *hispidus*, *P. granuliferus*, *P. ordinatus*, *Odontaster setosus*, *O. robustus*, *Prionaster elegans*, *Sideriaster grandis*, *Marginaster austerus*.

212.

1899. VERRILL, A. E. North American Ophiuroidea. I. Revision of certain families and genera of West Indian Ophiurans. II. A faunal catalogue of the known species of West Indian Ophiurans.

Trans. Conn. Acad. Arts and Sciences 1899, vol. 10, pp. 301-386, 2 pls.

Based in part on *Albatross* collections. New genera and species: *Amphioplus*, *Ophiochondrella*, *Ophiobyrsella*, *Astrogeron*, *Amphiocnida*, *Astrocladus*, *Amphioplus agassizii*, *Ophiacantha* (*Ophiectodia*) *pectinula*, *Ophioscolex fragilis*.

212a.

1899–1900. AGASSIZ, A. Explorations of the *Albatross* in the Pacific Ocean. Letters to U. S. Commissioner of Fisheries.

Science, Dec., 1899; Jan. and April, 1900.

Preliminary reports submitted during the voyage. See No. 213.

213.

1900. AGASSIZ, A. Explorations of the *Albatross* in the Pacific Ocean. [Extract from a letter to Hon. George M. Bowers, U. S. Commissioner of Fish and Fisheries, dated Papeete Harbor, Tahiti Island, Sept. 30, 189 , on the trip of the *Albatross* from San Francisco to Papeete.]

Am. Jour. Sci. 1900, fourth series, vol. 9, No. 49, Jan., pp. 33-43.

The same. II. The Paumotus. [Letter No. 2, dated Papeete Harbor, Nov. 6, 1899, etc.]

Am. Jour. Sci. 1900, fourth series, vol. 9, No. 50, Feb., pp. 109-116.

The same. III. [Letter No. 3, dated Suva Harbor, Fiji Islands, Dec. 11, 1899, etc.]

Am. Jour. Sci., fourth series, vol. 9, No. 51, Mar., 1900, pp. 193-198.

The same. IV. [Letter No. 4, Yokohama, Japan, Mar. 5, 1900, etc.]

Am. Jour. Sci., fourth series, vol. 9, No. 53, May, 1900, pp. 369-374.

Preliminary reports submitted during the voyage. The same series was

213.

1900. AGASSIZ, A.—Continued.
published in Science (U. S.) for Dec., 1899, Jan., and April, 1900. Letter No. 3 describes successful haul of the dredge 75 miles to the eastward of Tongatabu, in 4,173 fathoms, the deepest haul ever made. The net contained silicious sponges and brown volcanic mud, with radiolarians. Letter No. 4 records the deepest sounding of the *Albatross*, near Guam, in 4,813 fathoms.

214.

1900. MOORE, H. F. The *Albatross* South Sea Expedition.

Rep. U. S. F. C. 1900, part 26, pp. 137–161.

An account of the expedition, in charge of Alexander Agassiz, for deep-sea investigations and the study of coral reefs. Sketch of the voyage from San Francisco, Cal., to Yokohama, Japan, via the Marquesas, Paumotus, Society, Cook, Tonga, Fiji, Gilbert, Marshall, Caroline, and Ladrone islands.

215.

1900. BAKER, RAY STANNARD. The Bottom of the Sea.

McClure's Mag., Dec., pp. 160–170, 8 cuts.

An authorized account of the researches of Sir John Murray, in the Science of Oceanography. Contains references to the work of the *Albatross* in the Pacific Ocean.

216.

1900. DALL, WILLIAM H. Synopsis of the Solenidæ of North America and the Antilles.

Proc. U. S. Nat. Mus., vol. 22, pp. 107, 112.

Based in part on *Albatross* collections. New species here described: *Solen mexicanus*, *Ensis californicus*, *Tagelus poeyi*.

217.

1900. RATHBUN, MARY J. Synopsis of North American Invertebrates. VII. The cyclometopous or cancroid crabs of North America.

Am. Nat., vol. 34, Feb., pp. 131–143.

Based in part on *Albatross* collections. Contains analytical keys and bibliography.

218.

1900. NUTTING, CHARLES CLEVELAND. American Hydroids. Part I. The Plumularidæ.

U. S. Nat. Mus. Special Bulletin, 285 pp., 34 pls.

Contains morphology of the Plumularidæ; systematic discussion; bibliography. Based largely on the dredgings of the *Albatross*. New genera and species described are as follows: *Monotheca*, *Calvinia*, *Thecocarpus*, *Nuditheca*, *Plumularia altitheca*, *P. floridana*, *P. alternata*, *P. inermis*, *P. goodei*, *P. corrugata*, *P. palmeri*, *P. virginiæ*, *P. profunda*, *P. dendritica*, *P. paucinoda*, *Antennularia americana*, *A. rugosa*, *A. geniculata*, *A. pinnata*, *Monotheca margaretta*, *Antennopsis distans*, *A. longicorna*, *A. nigra*, *Schizotricha dichotoma*, *S. parvula*, *Diplopteron quadricorne*, *D. grande*, *D longipinna*, *Polyplumularia armata*, *Aglaophenia flowersi*, *A. elegans*, *A. aperta*, *A. cristifrons*, *A. contorta*, *A. mammillata*, *A. minima*, *A. rathbuni*, *A. latirostris*, *A. octocarpa*, *A. bicornuta*, *Calvinia mirabilis*, *Thecocarpus normani*, *T. benedicti*, *Cladocarpus obliquus*, *C. septatus*, *C. flexuosus*, *C. grandis*, *C. carinatus*, *Aglaophenopsis distans*, *A. verrilli*, *Lytocarpus clarkei*, *L. curtus*, *L. furcatus*, *Halicornaria longicauda*, *H. variabilis*.

219.

1900. STEJNEGER, LEONHARD. Reports on dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico, and in the Gulf of California, in charge of Alexander Agassiz, carried on by the *Albatross*, during 1891. XXVIII. Description of two new lizards of the genus Anolis, from Cocos and Malpelo islands.

Bull. Mus. Comp. Zool. 1900, vol. 36, pp. 161–164, 1 plate.

Anolis agassizi from Malpelo and *A. townsendi* from Cocos are described as new species.

220.

1901. BENEDICT, JAMES E. The hermit crabs of the *Pagurus bernhardus* type.

Proc. U. S. Nat. Mus. vol. 23, pp. 451–466.

Based in part on *Albatross* collections.

221.

1901. DALL, WILLIAM H. Synopsis of the family Tellinidæ and of the North American species.

Proc. U. S. Nat. Mus., vol. 23, pp. 285–326.

Based in part on *Albatross* collections. New species described: *Tellina georgiana, T. iheringi, T. americana, T. promera, T. flagellum, T. colorata, T. texana, T. reclusa, T. pacifica, T. pristiphora, T. leucogonia, T. meropsis, T. amianta, T. paziana, T. macneilii, T. suffusa, T. cerrosiana, T. panamensis, T. recurva, T. santarosæ, Macoma phenax, M. extenuata, M. tageliformis, M. krausei, M. sitkana, M. alaskana, M. panamensis.*

222.

1901. DALL, WILLIAM H. Synopsis of the family Cardiidæ and of the North American species.

Proc. U. S. Nat. Mus., vol. 23, pp. 381–392.

Based in part on *Albatross* collections.

223.

1901. RICHARDSON, HARRIET. Key to the Isopods of the Atlantic coast of North America, with descriptions of new and little-known species.

Proc. U. S. Nat. Mus., vol. 23, pp. 493–579.

Based in part on *Albatross* collections. The genus *Synurops* and the following species described as new: *Calathura crenulata, Cirolana obtruncata, C. albida, Corallana sexticornis, Ægathoa linguifrons, Sphæroma yucatanum, Dynamene angulata, Cilicæa linguicauda, Erichsonella floridana, Arcturus caribbæus, Eurycope caribbea, Synuropus granulatus, Philoscia richmondi, Sphæroniscus portoricensis.*

224.

1901. JORDAN, DAVID STARR, and JOHN OTTERBEIN SNYDER. A list of fishes collected in Japan by Keinosuke Otaki and by the U. S. F. C. steamer *Albatross*, with descriptions of 14 new species.

Proc. U. S. Nat. Mus., vol. 23, pp. 335–380, 12 pls.

The following genera and species are described as new: *Ishikauia, Otakia, Konosirus, Bryttosus, Eteliscus, Trifissus, Rhombiscus, Kareius, Usinosita, Zebrias, Areliscus, Insidiator, Chimæra*

224.

1901. JORDAN, DAVID STARR, and JOHN OTTERBEIN SNYDER—Cont'd.

phantasma, Gobio biwæ, G. mayedæ, Otakia rasborina, Congrellus meeki, Pseudotolithus mitsukurii, Sebastodes hakodatis, S. scythropus, Scorpæna onaria, Callionymus beniteguri, Trifissus ioturus, Blennius yatebei, Cœlorhynchus kishinouyei, Verasper otakii.

225.

1901. Cruise of the U. S. F. C. steamer *Albatross* in the Tropical Pacific, August 1899–March 1900, and list of the stations occupied.

Printed by Mus. Comp. Zool., 1901, pp. 45–64.

Abstract from log of steamer *Albatross*. The first part gives daily positions of the ship; the second, positions of stations with temperature observations, depth, nature of bottom, etc. Total distance run, San Francisco to Yokohama, 15,122 miles.

226.

1901. JORDAN, DAVID STARR, and JOHN OTTERBEIN SNYDER. A review of the lancelets, hag-fishes, and lampreys of Japan, with a description of two new species.

Proc. U. S. Nat. Mus., vol. 23, pp. 725–734, 1 pl.

Based in part on *Albatross* collections. *Branchiostoma nakagawæ* and *Myxine garmani* described as new.

227.

1901. BENEDICT, JAMES E. Four new symmetrical hermit crabs (Pagurids) from the West India region.

Proc. U. S. Nat. Mus., vol. 23, pp. 771–776.

Based on *Albatross* dredgings. Species described: *Cancellus ornatus, C. spongicola, Pylocheles partitus, Mixtopagurus gilli.*

228.

1901. RIDGWAY, ROBERT. The birds of North and Middle America. Part I. Fringillidæ.

Bull. U. S. Nat. Mus. No. 50, 1901, pp. XXXI, 715, 20 pls.

Contains descriptions of all North American Fringillidæ from *Albatross* collections, including those of the Galapagos and West Indian islands.

228a.

1901. DALL, WILLIAM HEALEY. Synopsis of the Lucinacea and of the American species.

Proc. U. S. Nat. Mus., vol. 23, pp. 779–833, 4 pls.

Based in part on *Albatross* collections. The following species, chiefly from *Albatross* and *Fish Hawk* dredgings, described as new: *Thyasira excavata, T. tomeana, T. magellanica, Axinopsis viridis, Diplodonta aleutica, Codakia colpoica, C. cubana, C. portoricana, C. mexicana, C. galapagana, C. chiquita, Phacoides bermudensis, P. crenella, P. amiantus, P. lamprus, P. heroicus, P. approximatus.*

229.

1901. COCKERELL, T. D. A. On a slug of the genus Veronicella from Tahiti.

Proc. U. S. Nat. Mus., vol. 23, pp. 835–836.

Veronicella agassizi from *Albatross* collections described as new, with list of recently described Pacific species.

229a.

1901. JORDAN, DAVID STARR, and JOHN OTTERBEIN SNYDER. A review of the apodal fishes or eels of Japan, with descriptions of 19 new species.

Proc. U. S. Nat. Mus., vol. 23, pp. 837–890, 22 figs.

Based in part on *Albatross* collections. New genera: *Xyrias, Æmasia.* New species: *Synaphobranchus iraconis, S. jenkinsi, Leptocephalus erebennus, L. kiusiuanus, L. riukiuanus, L. mystromi, L. retrotinctus, Chlopsis fierasfer, Muræniehthys owstoni, M. hattœ, M. aoki, Sphagebranchus moseri, Pisoodonophis zophistius, Xyrias revulsus, Microdonophis erabo, Ophichthus asakusœ, O. tsuchidœ, Æmasia lichenosa, Echidna kishinouyei, Uropterygius okinawœ.*

229b.

1901. STEJNEGER, LEONHARD. Diagnosis of a new species of Iguanoid lizard from Green Cay, Bahama Islands.

Proc. U. S. Nat. Mus., vol. 23, p. 471.

Leiocephalus virescens from *Albatross* collections described as new.

[NOTE.—The preceding are all American publications. The few titles of European publications which follow either relate directly to the work of the *Albatross* or are of special interest in this connection.]

230.

GILL, THEODORE, and JOHN A. RYDER. Note on Eurypharynx and an allied new genus.

Zool. Anz. 1884, 7, pp. 119–123.

Based on *Albatross* dredgings. Comments on the relationships and characters of Gastrostomus and Eurypharynx.

231.

GILL, THEODORE. What are the Saccopharyngoid fishes?

Nature, 1884, vol. 29, Jan. 10, p. 236.

Based on *Albatross* dredgings. A discussion of the relationships and characters of the Lyomeri.

232.

SCHULZE, FRZ. EILHARD. Amerikanische Hexactinelliden nach dem Materiale der Albatross-Expedition. Herausgegeben mit Unterstützung d. kgl. preuss. Akademie der Wissenschaften, 1899. Jena, Gust. Fischer. 4°, 126 pp. Atlas von 19 Taf.

The following genera and species are described as new: *Calycosoma, Calycosaccus, Aphorme, Acanthosaccus, Claviscopulia, Bathyxiphus, Hyalonema schmidti, H. hercules, H. populiferum, H. ovuliferum, Holascus undulatus, Calycosoma validum, Calycosaccus ijimai, Caulophacus agassizii, Aphorme horrida, Bathydorus uncifer, Acanthascus plutei, Staurocalyptus solidus, S. fasciculatus, Rhabdocalyptus tener, R. nodulosus, R. asper, R. mirabilis, Acanthosaccus tenuis, Farrea aculeata, F. convolvulus, Eurete erectum, claviscopulia intermedia, Chonelasma tenerum, Bathyxiphus subtilis.*

233.

MURRAY, Sir JOHN. Address to the geographical section of the British association.

Scottish Geog. Mag., 1899, vol. 15, Oct., pp. 505–522, map.

An important summary of the state of oceanographic science. Contains a reference to the investigations of the *Albatross* in the Pacific Ocean.

PAPERS IN PREPARATION RELATING TO WORK OF THE ALBATROSS.

In preparation for the Bulletin of the U. S. Fish Comm'ssion:

Alaska Salmon Investigations in 1900. Commander J. F. Moser.
Alaska Salmon Investigations in 1901. Commander J. F. Moser.
Report on the cruise of the U. S. Fish Commission steamer *Albatross*, in the South Seas, 1899–1900. Commander J. F. Moser.

The following are in preparation for publication by the Museum of Comparative Zoology, Cambridge:

Reports on the Results of the Expedition of 1891 of the U. S. F. C. steamer *Albatross*, Lieut. Commander Z. L. Tanner, U. S. N., commanding, in charge of Alexander Agassiz:

Pelagic Fauna. A. Agassiz.
Echini. A. Agassiz.
Panamic Deep-Sea Fauna. A. Agassiz.
Sagittæ. K. Brandt.
Thalassicolæ. K. Brandt.
Siphonophores. C. Chun.
Eyes of Deep-Sea Crustacea. C. Chun.
Mollusks. W. H. Dall.
Cirripeds. H. J. Hansen.
Ascidians. W. A. Herdman.
Antipathids. S. J. Hickson.
Cephalopods. W. E. Hoyle.
Deep-Sea Corals. G. von Koch.
Solenogaster. C. A. Kofoid.
Phosphorescent Organs of Fishes. R. von Lendenfeld.
Branchiocerianthus. E. L. Mark.
Bottom Specimens. John Murray.
Alcoholic Birds. Robert Ridgway.
Pteropods and Heteropods. P. Schiemenz.
Starfishes. H. Ludwig.
Alcyonarians. Theo. Studer.
Salpidæ and Doliolidæ. M. P. A. Traüstedt.
Halobatidæ. E. P. Van Duzee.
Sipunculids. H. B. Ward.
Sponges. H. V Wilson.
Nemerteans and Annelids. W. McM. Woodworth.

Reports on the Scientific Results of the Expedition to the Tropical Pacific, in charge of Alexander Agassiz, on the U. S. F. C. steamer *Albatross*, from August, 1899, to March, 1900, Commander Jefferson F. Moser, U. S. N., commanding:

General Report of the Expedition. A. Agassiz.
Coral Reefs of the Tropical Pacific. A. Agassiz.
Echini. A. Agassiz.
Acalephs. A. Agassiz and A. G. Mayer.
Earthworms. F. E. Beddard.
Mollusks. W. H. Dall.
Volcanic Rocks. Reginald A. Daly.
Sharks' Teeth from the Red Clay. C. R. Eastman.
Coralliferous Limestones.
Crustacea. Walter Faxon.
Foraminifera and Radiolaria. James M. Flint.
Insects. S. Henshaw and A. G. Mayer.
Cephalopods. W. E. Hoyle.
Copepods. A. Kramer.
Starfishes and Ophiurans. H. Ludwig.
Genus Partula. A. G. Mayer.
Holothurians. K. Mitsukuri.
Pelagic Crustacea. H. F. Moore.
Ostracods. G. W. Müller.
Bottom Specimens. Sir John Murray.
Hydrocorallidæ. R. Rathbun.
Ascidians. W. E. Ritter.
Siliceous Sponges. F. E. Schulze.
Reptiles. L. Stejneger.
Mammals, Birds, and Fishes. C. H. Townsend.
Corals Recent, and Fossil. T. W. Vaughan.
Nullipores and Corallines. Mrs. Max Weber.
Annelids. W. McM. Woodworth.

In preparation for the Bulletin and the Report of the U. S. National Museum:

A review of the Gobiidæ of Japan. D. S. Jordan and J. O. Snyder.
Aboriginal American Harpoons. O. T. Mason.
Aboriginal American Basketry. O. T. Mason.

LIST OF PUBLICATIONS SHOWING THE TITLES OF ALBATROSS PAPERS CONTAINED IN EACH.

NOTE.—The numbers at ends of references are those of the chronological list.

In the Reports of the United States Commission of Fish and Fisheries:

Report on work of the U. S. F. C. steamer *Fish Hawk* for the year ending Dec. 31, 1882, and on the construction of the steamer *Albatross*. Tanner. 4.
Report on the construction and outfit of the *Albatross*. Tanner. 13.
Report on the work of the *Albatross*, 1883. Tanner. 14.
Report on the work of the *Albatross*, 1884. Tanner. 35.
Report on the work of the *Albatross*, 1885. Tanner. 45.
Report on the work of the *Albatross*, 1886. Tanner. 52.
Report on the work of the *Albatross*, 1887, 1888. Tanner. 70.
Report upon the investigations of the *Albatross*, 1889. Tanner. 87.
Report upon the investigations of the *Albatross*, 1889–1891. Tanner. 99.
Report upon the investigations of the *Albatross*, 1892. Tanner. 111.
Report on the work of the *Albatross*, 1893. Tanner. 132.
Report upon the operations of the *Albatross*, 1894. Tanner and Drake. 159.
Report upon the investigations of the *Albatross*, 1895. Drake. 160.
Records of observations made on board the *Albatross*, 1896. Drake. 185.
Report on the work of the *Albatross*, 1897. (Abstract.) Moser. 190.
The *Albatross* South Sea expedition. Moore. 214.
Ichthyological collections of the *Albatross*, 1890–1891. Gilbert. 141.
Report on the fishes obtained by the *Albatross* in the vicinity of Santa Catalina Island and Monterey Bay. Gilbert. 204.
Report on the Decapod Crustacea of the *Albatross* dredgings off the east coast of the United States in 1883. Smith (S. I.). 10.
Report on the Decapod Crustacea of the *Albatross* dredgings off east coast of United States during summer and autumn of 1884. Smith (S. I.). 47.
Lists of dredging stations of the U. S. Fish Commission, U. S. Coast Survey, and the British steamer *Challenger*, in North American waters, from 1867 to 1887, with those of the principal European government expeditions in the Atlantic and Arctic oceans. Smith (Sanderson). 58.
Report on the medusæ collected by the *Albatross* in the region of the Gulf Stream in 1883–84. Fewkes. 30.
Report on the medusæ collected by the *Albatross* in the region of the Gulf Stream in 1885–86. Fewkes. 55.
Report on the discovery and investigation of fishing grounds made by the *Albatross* during a cruise along the Atlantic coast and in the Gulf of Mexico, with notes on the Gulf fisheries. Collins. 44.
Results of the explorations made by the *Albatross* off the northern coast of the United States in 1883. Verrill. 16.
Closing tow net for submarine use at all depths. Townsend. 165.

In the Bulletins of the U. S. Fish Commission:

The fishing grounds of Bristol Bay, Alaska. Tanner. 71.
On the appliances for collecting pelagic organisms. Tanner. 133.
Deep-sea exploration. Tanner. 169.
Fishing-grounds of Alaska, Washington Territory, and Oregon. Tanner. 59.
Report of the movements and operations of the *Albatross* from September 15 to 20, 1887. Tanner. 53.
Record of hydrographic soundings and dredging stations. Tanner. 46.
The salmon and salmon fisheries of Alaska. Moser. 207.
Report on the salmon fisheries of Alaska. McDonald. 126.
A summary of the fishery investigations. Rathbun. 117.
Notes on fishes collected at Cozumel, Yucatan. Bean. 60.
Notes upon octopus, flying-fish, etc. Nye. 25.
Notes taken during cruise of the *Albatross* to Grand Banks. Nye. 24.
Hydrographic work of the *Albatross* in 1884. Schroeder. 15.
Report on the working of the boilers and engine of the *Albatross*. Baird. 9.
Annual report on the electric lighting of the *Albatross*. Baird. 8.
Report upon the pearl fishery of the Gulf of California. Townsend. 84.
Investigation of fishing banks. Collins. 48.

In the Proceedings of the U. S. National Museum:

Scientific results of explorations by the U. S. F. C. steamer *Albatross:*

I. Birds collected in Galapagos Islands in 1888. Ridgway. 57.
II. Birds collected on the island of Santa Lucia, West Indies, Abrolhos Islands, Brazil, and at the Straits of Magellan in 1887–88. Ridgway. 58.

In the Proceedings of the U. S. National Museum—Continued.

Scientific results of explorations by the U. S. F. C. steamer *Albatross*—Cont'd.

III. Batrachians and reptiles collected in 1887–88. Cope. 62.

IV. Descriptions of new species of fishes collected at the Galapagos Islands and along the coast of the United States of Colombia, 1887–88. Jordan & Bollman. 66.

V. Annotated catalogue of insects collected in 1887–88. Howard. 67.

VI. List of the plants collected in Alaska in 1888. Vasey. 69.

VII. Preliminary report on the collection of Mollusca and Brachiopoda obtained in 1887–88. Dall. 63.

VIII. Description of a new Cottoid fish from British Columbia. Bean. 61.

IX. Catalogue of fishes collected at Port Castries, St. Lucia, by the *Albatross*, November, 1888. Jordan. 65.

X. On certain Mesozoic fossils from the islands of St. Paul and St. Peter in the Straits of Magellan. White. 79.

XI. New fishes collected off the coast of Alaska and the adjacent region southward. Bean. 75.

XII. A preliminary report on fishes collected by the *Albatross* on the Pacific coast of North America during 1889. Gilbert. 72.

XIII. Catalogue of skeletons of birds collected at Abrolhos Islands, Brazil, the Straits of Magellan, and the Galapagos Islands, in 1887–88. Lucas. 78.

XIV. Birds from the coasts of western North America and adjacent islands, collected in 1888–89. Townsend. 82.

XV. Reptiles from Clarion and Socorro islands and the Gulf of California. Townsend. 83.

XVI. Plants collected in 1889 at Socorro and Clarion islands, Pacific Ocean. Vasey. 77.

XVII. Descriptions of new West American land, fresh-water, and marine shells. Stearns. 68.

XVIII. List of fishes obtained in the harbor of Bahia, Brazil, and in adjacent waters. Jordan. 76.

XIX. A supplementary list of fishes collected at the Galapagos Islands and Panama. Gilbert. 73.

XX. On some new or interesting west American shells obtained from the dredgings of the *Albatross* in 1888. Dall. 95.

XXI. Apodal fishes from the tropical Pacific. Gilbert. 92.

XXII. Descriptions of 34 new species of fishes collected in 1888 and 1889, principally among the Santa Barbara Islands and in the Gulf of California. Gilbert. 93.

XXIII. Report on the Actiniæ collected by the *Albatross* during the winter of 1887–88. McMurrich. 120.

XXIV. Descriptions of new genera and species of crabs from the west coast of North America and the Sandwich Islands. Rathbun (M. J.). 118.

XXV. The Mollusk fauna of the Galapagos Islands. Stearns. 115.

XXVI. Report on the Pteropods and Heteropods collected by the *Albatross* during the voyage from Norfolk, Va., to San Francisco, Cal., 1887–88. Peck. 114.

XXVII. Catalogue of a collection of birds made in Alaska by Mr. C. H. Townsend during the cruise of the *Albatross* in 1888. Ridgway. 112.

XXVIII. On Cetomimidæ and Rondeletiidæ, two new families of Bathybial fishes. Goode & Bean. 136.

XXIX. A revision of the order Heteromi, deep-sea fishes. Goode & Bean. 137.

XXX. On Harriotta, a new type of Chimæroid fish. Goode & Bean. 138.

XXXI. Descriptions of new genera and species of crabs of the family Lithodidæ. Benedict. 146.

XXXII. Report on the Crustacea of the order Stomatopoda collected by the *Albatross* between 1885 and 1891. Bigelow. 147.

XXXIII. Descriptions of two new flounders, Gastropsetta frontalis and Cyclopsetta chittendeni. Bean. 135.

XXXIV. Report on Mollusca and Brachiopoda dredged in deep water, chiefly near the Hawaiian Islands. Dall. 142.

Diagnoses of new genera and species of deep-sea fish-like vertebrates. Gill. 1.

Diagnoses of new genera of Nemichthyoid eels. Gill & Ryder. 2.

On the literature and systematic relations of the Saccopharyngoid fishes. Gill & Ryder. 7.

In the Proceedings of the U. S. National Museum—Continued.

On some new or little-known Decapod Crustacea from recent Fish Commission dredgings off the east coast of the United States. Smith (S. I.). 20.

On a collection of birds made by Messrs. J. E. Benedict and W. Nye, of the steamer *Albatross*. Ridgway. 21.

Description of a new species of Plectromus (P. crassiceps) taken by the U. S. Fish Commission. Bean. 26.

Description of Leptophidium cervinum and L. marmoratum, new fishes from deep water off the Atlantic and Gulf coasts. Goode. 27.

Descriptions of new fishes obtained by the U. S. Fish Commission, mainly from deep water off the Atlantic and Gulf coasts. Goode. 28.

On a collection of Medusæ made by the *Albatross* in the Caribbean Sea and Gulf of Mexico. Fewkes. 31.

Report upon the Echini collected by the *Albatross* in the Caribbean Sea and Gulf of Mexico, January to May, 1884. Rathbun (R.). 32.

Notice of a collection of Stalked Crinoids made by the *Albatross* in the Gulf of Mexico and Caribbean Sea, 1884 and 1885. Rathbun, (R.). 33.

Report upon the Echini collected by the *Albatross* in the Gulf of Mexico from January to March, 1885. Rathbun (R.). 34.

Description of a new hawk from Cozumel. Ridgway. 36.

Catalogue of a collection of birds made on the island of Cozumel, Yucatan, by the naturalists of the *Albatross*. Ridgway. 37.

On some genera and species of Penæidæ, mostly from recent dredgings of the U. S. Fish Commission. Smith (S. I.). 39.

A new Crustacean allied to Homarus and Nephrops. Smith (S. I.). 40.

Notice of recent additions to the marine invertebrata of the northeastern coast of America, with descriptions of new genera and species and critical remarks on others. Verrill. 41.

Descriptions of ten species and one new genus of Annelids from the dredgings of the *Albatross*. Benedict. 43.

List of the Batrachia and Reptilia of the Bahama Islands. Cope. 49.

De cription of a new form of Spindalis from the Bahamas. Ridgway. 51.

The genus Panopeus. Benedict & Rathbun (M. J.). 80.

Corystoid crabs of the genera Telmessus and Erimacrus. Benedict. 101.

Preliminary descriptions of 37 new species of hermit crabs of the genus Eupagurus. Benedict. 101.

Description of a new species of star-gazer (Cathetostoma albigutta) from the Gulf of Mexico. Bean. 105.

Catalogue of the crabs of the family Pericerida in the U. S. National Museum. Rathbun (M. J.). 106.

A new storm petrel from the coast of western Mexico. Ridgway. 113.

The shells of the Tres Marias and other localities along the shores of Lower California and the Gulf of California. Stearns. 116.

Catalogue of the crabs of the family Maiidæ in the U. S. National Museum. Rathbun (M. J.). 119.

List of Diatomaceæ from a deep-sea dredging in the Atlantic Ocean off Delaware Bay by the *Albatross*. Mann. 127.

A revision of the fishes of the subfamily Sebastinæ of the Pacific coast of America. Eigenmann & Beeson. 128.

A review of the fossil flora of Alaska, with descriptions of new species. Knowlton. 129.

Descriptions of a new genus and four new species of crabs from the Antillean region. Rathbun (M. J.). 153.

Notes on the crabs of the family Inachidæ in the U. S. National Museum. Rathbun (M. J.). 154.

The genus Callinectes. Rathbun (M. J.). 155.

Descriptions of new species of starfishes and ophiurans, with a revision of certain species formerly described, mostly from the collections made by the U. S. Fish Commission. Verrill. 156.

Diagnoses of new species of Mollusks from west coast of America. Dall. 166.

Report on fishes dredged in deep water near Hawaiian Islands. Gilbert. 170.

Descriptions of 22 new species of fishes collected by *Albatross*. Gilbert. 171.

Birds of the Galapagos Archipelago. Ridgway. 178.

Revision of the deep-water Mollusca of the Atlantic coast of North America. Verrill. 189.

Synopsis of the Recent and Tertiary Leptonacea of North America and the West Indies. Dall. 195.

Notes on the capture of rare fishes. Bean. 199.

The Brachyura collected by the *Albatross* on the voyage from Norfolk, Va., to San Francisco, Cal., 1887–88. Rathbun (M. J.). 200.

In the Proceedings of the U. S. National Museum—Continued.

The birds of the Kuril Islands. Steineger. 201.

Key to the Isopods of the Pacific coast of North America. Richardson. 202.

On the Coleopterous insects of Galapagos Islands. Linnell. 203.

On the occurrence of Caulolepis longidens Gill on the coast of California. Gilbert. 205.

Synopsis of the Solenidæ of North America and the Antilles. Dall. 216.

The hermit crabs of the *Pagurus bernhardus* type. Benedict. 220.

Synopsis of the family Tellinidæ and of the North American species. Dall. 221.

Synopsis of the family Cariidæ and of the North American species. Dall. 222.

Key to the Isopods of the Atlantic coast of North America. Richardson. 223.

A list of fishes collected in Japan by Keinosuke Otaki and by the *Albatross*. Jordan. 224.

On the anatomy and relations of the Eurypharyngidæ. Gill & Ryder. 3*a*.

The Ganelets, hag-fishes, and lampreys of Japan. Jordan & Snyder. 226.

Four new symmetrical crabs (Pagurids) from the West India region. Benedict. 227.

On a slug of the genus Veronicella. Cockerell. 229.

Synopsis of the Lucinacea. Dall. 228*a*.

Review of the apodal fishes of Japan. Jordan & Snyder. 229*a*.

A new species of Iguanoid lizard from Green Cay, Bahamas. Stejneger. 229*b*.

In the Bulletin and the Report of the United States National Museum:

Oceanic Ichthyology. Goode & Bean. 139.

The fishes of North and Middle America. Jordan & Everman. 163.

American Hydroids. Part 1. The Plumularidæ. Nutting. 218.

A preliminary catalogue of the shell bearing marine Mollusks and Brachiopods of the southwestern coast of the United States. Dall. 54.

Recent Foraminifera. A descriptive catalogue of specimens dredged by the U. S. F. C. steamer *Albatross*. Flint. 193.

In the Bulletins and Memoirs of the Museum of Comparative Zoology:

Reports on dredging operations off the west coast of Central America to the Galapagos, to the west coast of Mexico and in the Gulf of California, in charge of Alexander Agassiz, carried on by the U. S. F. C. steamer *Albatross*, Lieut. Commander Z. L. Tanner, U. S. N., commanding.

Three letters from Alexander Agassiz to the Hon. Marshall McDonald, U. S. Commissioner of Fish and Fisheries, on the dredging operations off the west coast of Central America, etc. Agassiz. 74.

Notice of Calamocrinus diomedæ, a new Stalked Crinoid from the Galapagos. Agassiz. 64.

I. Calamocrinus diomedæ, a new Stalked Crinoid, with notes on the homologies of Echinoderms. Agassiz. 85.

II. General sketch of the expedition of the *Albatross* from February to May, 1891. Agassiz. 89.

III. On a peculiar type of arenaceous foraminifer from the American tropical Pacific. Neusina agassizi. Goes. 94.

IV. Vorläufiger Bericht über die erbeuteten Holothurien. Ludwig. 107.

V. Rocks collected from the Galapagos Islands. Merrill. 110.

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VII. The Orthoptera of the Galapagos Islands. Scudder, S. 108.

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IX. Report on the Turbellaria. Woodworth. 123.

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XXVIII. Description of two new lizards of the genus Anolis from Cocos and Malpelo islands. Stejneger. 219.
Descriptions of thirteen species and two genera of fishes from the *Blake* collection. Goode. 29.
Oceanic Ichthyology. Goode & Bean. 139.
Cruise of the *Albatross* in the Tropical Pacific, August 1899–March 1900, and list of the stations occupied. 225.

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Prepared under the direction of C.H. Townsend

UNITED STATES

CARIBBEAN SEA

COLOMBIA

VENEZUELA

BRAZIL

GULF OF MEXICO

NOTE:

The numbers designate the Dredging Stations as entered on the records of the U.S. Fish Commission. All Dredging data shown in red

THE NORRIS PETERS CO. PHOTO-LITHO. WASHINGTON, D.C.

CHART SHOWING THE POSITIONS OF THE DREDGINGS DEEPER THAN 100 FATHOMS MADE BY THE U.S. FISH COMMISSION STEAMSHIP ALBATROSS IN THE PACIFIC OCEAN AND BERING SEA FROM 1888 TO 1900

Prepared under the direction of C.H. Townsend

NOTE:

The numbers designate the Dredging Stations as entered on the records of the U.S.F.C. Commission. Stations 3681-94 have received additional numbers marked a.a.

All Dredging data shown in red.

BERING SEA

SEA OF OKHOTSK

SEA OF JAPAN

ALEUTIAN ISLANDS

KAMCHATKA

SAKHALIN

HOKUSHU

HONSHU

JAPAN

CANADA

BRITISH COLUMBIA

QUEEN CHARLOTTE IS

VANCOUVER

UNITED STATES

MEXICO

GULF OF MEXICO

BAHAMA IS

HAITI

CARIBBEAN SEA

HONDURAS

NICARAGUA

COSTA RICA

VENEZUELA

COLOMBIA

ECUADOR

PERU

GALAPAGOS IS

HAWAIIAN ISLANDS

MARIANA OR LADRONE ISLANDS

CAROLINE ISLANDS

MARSHALL ISLANDS

GILBERT IS

PAPUA OR NEW GUINEA

SOLOMON IS

STA CRUZ IS

CORAL SEA

GULF OF CARPENTARIA

PHOENIX ISLANDS

UNION GROUP

SAMOAN OR NAVIGATOR IS

FIJI ISLANDS

TONGA OR HAPAI GROUP

FRIENDLY IS

MARQUESAS IS

SOCIETY ISLANDS

TUAMOTU OR LOW ARCHIPELAGO

TUBUAI OR AUSTRAL

COOK ISLANDS

THE HOMER PETERS OF PHILADELPHIA, WASHINGTON & C.

CHART SHOWING THE LOCATIONS OF THE DREDGINGS IN LESS THAN 100 FATHOMS MADE BY THE U. S. FISH COMMISSION STEAMSHIP ALBATROSS IN THE ATLANTIC AND PACIFIC OCEANS FROM 1883 TO 1900

Prepared under the direction of C. H. Townsend

NOTE

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All Dredging data shown in red.

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Albatross Commanders

1882 - 1894 Tanner
1894 - 1896 Drake
1896 - 19— Moser